# STIC Search Report
## EIC 1700

## STIC Database Tracking Number: 184542

**TO: Dawn Garrett**
**Location: REM 10C79**
**Art Unit : 1774**
**April 11, 2006**

**Case Serial Number: 10/774577**

**From: Les Henderson**
**Location: EIC 1700**
**REMSEN 4B30**
**Phone: 571/272-2538**
**Leslie.Henderson@uspto.gov**

## Search Notes

# STIC Search Results Feedback Form

## EIC17000

Questions about the scope or the results of the search? Contact ***the EIC searcher or contact:***

**Kathleen Fuller, EIC 1700 Team Leader**
**571/272-2505 REMSEN 4B28**

## Voluntary Results Feedback Form

- *I am an examiner in Workgroup:* ☐ *Example: 1713*
- *Relevant prior art* ***found****, search results used as follows:*
  - ☐ 102 rejection
  - ☐ 103 rejection
  - ☐ Cited as being of interest.
  - ☐ Helped examiner better understand the invention.
  - ☐ Helped examiner better understand the state of the art in their technology.

*Types of relevant prior art found:*

- ☐ Foreign Patent(s)
- ☐ Non-Patent Literature
  (journal articles, conference proceedings, new product announcements etc.)

- *Relevant prior art* ***not found:***
  - ☐ Results verified the lack of relevant prior art (helped determine patentability).
  - ☐ Results were not useful in determining patentability or understanding the invention.

**Comments:**

**Drop off or send completed forms to EIC1700 REMSEN 4B28**

Access DB# 84542

# SEARCH REQUEST FORM

**Scientific and Technical Information Center**

Requester's Full Name: DAWN GARRETT Examiner #: 76107 Date: 4/6/06
Art Unit: 1774 Phone Number ~~30~~ 2-1523 Serial Number: 10/774577
Mail Box and Bldg/Room Location: Remsen 10C79 Results Format Preferred (circle): PAPER DISK E-MAIL

**If more than one search is submitted, please prioritize searches in order of need.**

**********

Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc, if known. Please attach a copy of the cover sheet, pertinent claims, and abstract.

Title of Invention: (See Bib Data Sheet attached)

Inventors (please provide full names):

Earliest Priority Filing Date:

***For Sequence Searches Only* Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.**

Please search the compound shown in claims 1, 8, 10, 12.

Thank you.

SCIENTIFIC REFERENCE BR
Sci & Tech Inf Ctr
APR 7 RECD
Pat. & T.M. Office

**********

| STAFF USE ONLY | Type of Search | Vendors and cost where applicable |
|---|---|---|
| Searcher: LDH | NA Sequence (#) | STN ~~$800~~ LDH $805.42 |
| Searcher Phone #: | AA Sequence (#) | Dialog |
| Searcher Location: | Structure (#) 3 | Questel/Orbit |
| Date Searcher Picked Up: | Bibliographic | Dr.Link |
| Date Completed: 4/10/06 | Litigation | Lexis/Nexis |
| Searcher Prep & Review Time: 30 | Fulltext | Sequence Systems |
| Clerical Prep Time: 30 | Patent Family | WWW/Internet |
| Online Time: 95 | Other | Other (specify) |

PTO-1590 (8-01)

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                SEL RN

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                861909-12-8/BI)
                D SCAN

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                D L1 ALL

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                SAV L7 GAR577/A
L8            5 SEA ABB=ON  PLU=ON  L7 AND L2
                D SCAN

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L22           22 SEA ABB=ON  PLU=ON  L17
L23            0 SEA ABB=ON  PLU=ON  L18 AND L19 AND L20 AND L22
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L26           22 SEA ABB=ON  PLU=ON  L20 AND L22
L27            0 SEA ABB=ON  PLU=ON  L22 AND L18
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                 OR L30)
L32           69 SEA ABB=ON  PLU=ON  L31 OR L24
L33      1313541 SEA ABB=ON  PLU=ON  OPTIC?/SC,SX
L34          342 SEA ABB=ON  PLU=ON  L19 AND L33
L35           21 SEA ABB=ON  PLU=ON  L32 AND L33
L36           54 SEA ABB=ON  PLU=ON  L18 AND L33
L37            4 SEA ABB=ON  PLU=ON  L33 AND L22
L38           72 SEA ABB=ON  PLU=ON  (L35 OR L36 OR L37)
L39           21 SEA ABB=ON  PLU=ON  L35 OR L37
L40       116756 SEA ABB=ON  PLU=ON  ELECTROLUM!N? OR ORGANOLUM!N? OR
                 (ELECTRO OR ORGANO OR ORG#)(2A)LUM!N? OR LIGHT?(2A)(EMI
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L54           51 SEA ABB=ON  PLU=ON  L53 OR L39


=> => d que stat l54
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                 32316-92-0/BI OR 49610-35-7/BI OR 604-53-5/BI OR
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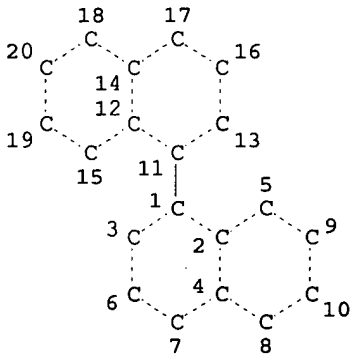

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DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
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NUMBER OF NODES IS 20

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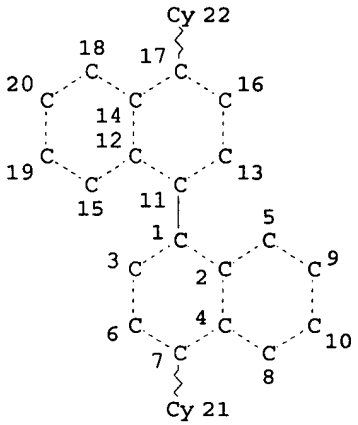


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DEFAULT ECLEVEL IS LIMITED

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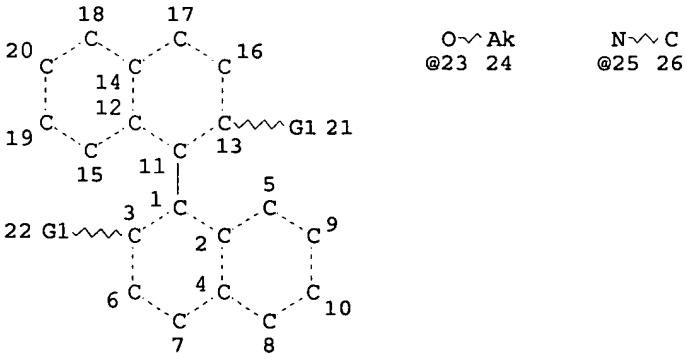


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NUMBER OF NODES IS 26

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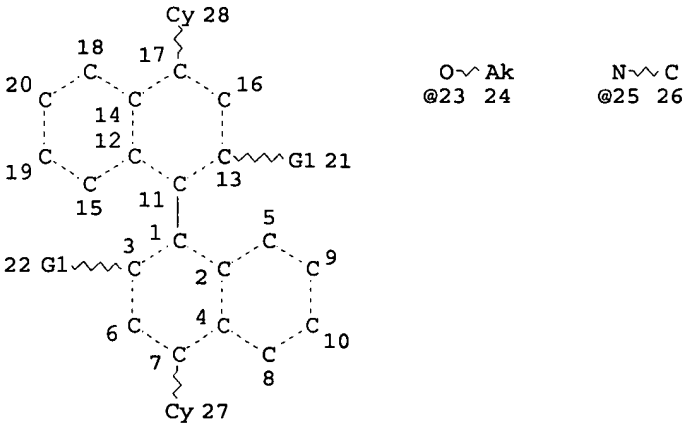


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DEFAULT ECLEVEL IS LIMITED

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NUMBER OF NODES IS 28

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L32 69 SEA FILE=HCAPLUS ABB=ON PLU=ON L31 OR L24
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L43 2559 SEA FILE=HCAPLUS ABB=ON PLU=ON L18 OR L20 OR L21 OR L22
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L46 QUE ABB=ON PLU=ON ELECTROD? OR CATHOD? OR ANOD?
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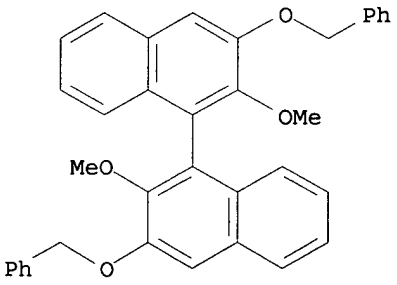
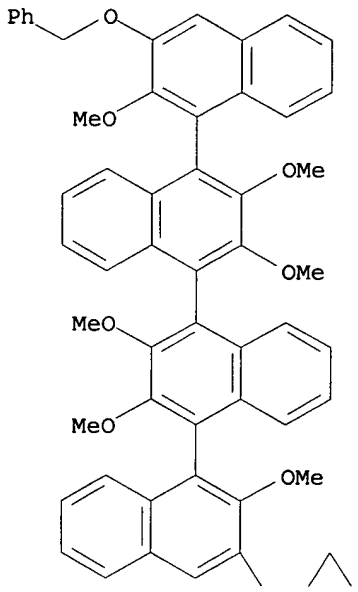
=> d l54 1-51 ibib abs hitstr hitind

L54 ANSWER 1 OF 51 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2006:81604 HCAPLUS
TITLE: Optical properties of oligo(2,3-dioxyfunctionalized)naphthalenes
AUTHOR(S): Tsubaki, Kazunori; Miura, Masaya; Nakamura, Asao; Kawabata, Takeo
CORPORATE SOURCE: Institute for Chemical Research, Kyoto University, Gokasho, Uji, Kyoto, 611-0011, Japan
SOURCE: Tetrahedron Letters (2006), 47(8), 1241-1244
CODEN: TELEAY; ISSN: 0040-4039
PUBLISHER: Elsevier B.V.
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The properties of 2 series of oligo(2,3-dioxyfunctionalized)naphthalenes which are connected at the 1,4-positions, i.e., methoxy derivs. and derivs. that possess 2 pyrene groups on the central scaffolding O functions, are described. In methoxy derivs., the fluorescence quantum yields increased by .apprx.20-80% as the number of naphthalene units increased. The intramol. energy transfer quantum yields of derivs. that possess 2 pyrene groups were .apprx.20% regardless of the number of naphthalene units.
IT INDEXING IN PROGRESS
IT **651026-26-5 651026-29-8 651026-32-3 651026-37-8 651299-89-7**
RL: PEP (Physical, engineering or chemical process); PRP (Properties); PYP (Physical process); PROC (Process)
(of oligo(dioxyfunctionalized)naphthalenes)
RN 651026-26-5 HCAPLUS
CN 1,1'-Binaphthalene, 2,2'-dimethoxy-3,3'-bis(phenylmethoxy)-, (1S)- (9CI) (CA INDEX NAME)




RN 651026-29-8 HCAPLUS
CN 1,1':4',1'':4'',1'''-Quaternaphthalene, 2,2',2'',2''',3',3''-hexamethoxy-3,3'''-bis(phenylmethoxy)-, (1S,1''S,1'''S)- (9CI) (CA INDEX NAME)

PAGE 1-A

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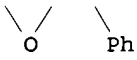


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',1'''''''-Octinaphthalene, 2,2',2'',2''',2'''',2''''',2'''''',2''
''''',3',3'',3''',3'''',3''''',3'''''',3''''''-tetradecamethoxy-3,3'''''''-
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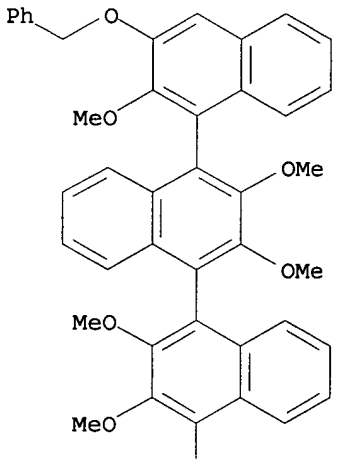
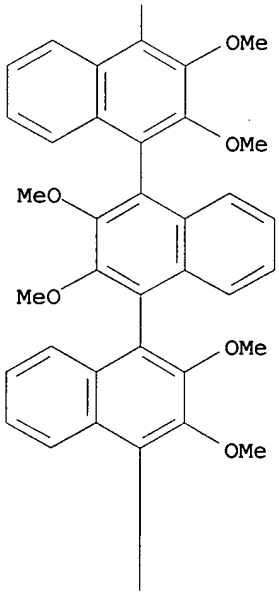
''S)- (9CI) (CA INDEX NAME)

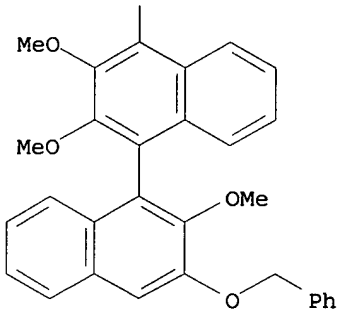
PAGE 1-A




PAGE 2-A



PAGE 3-A

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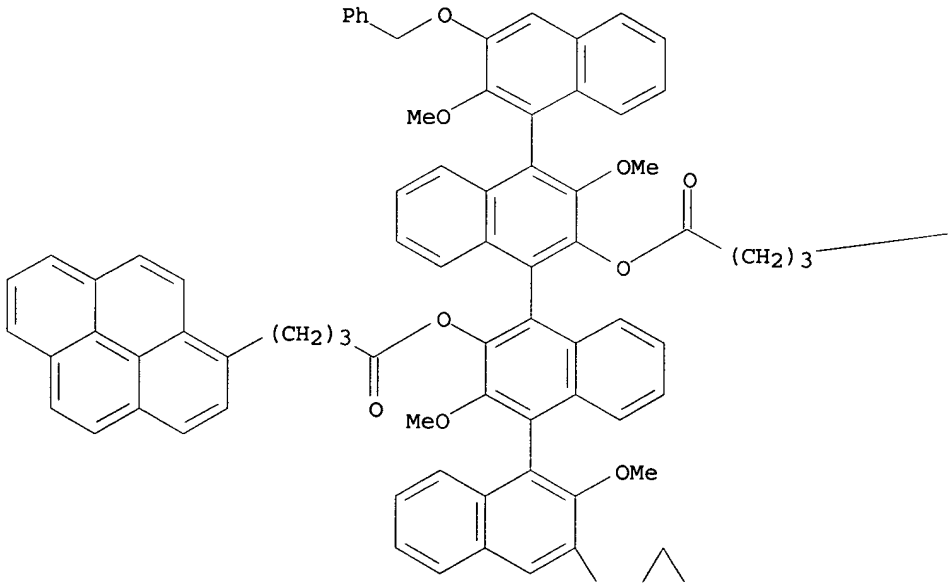
PAGE 1-A

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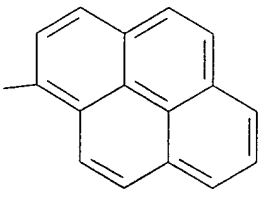

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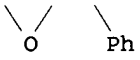

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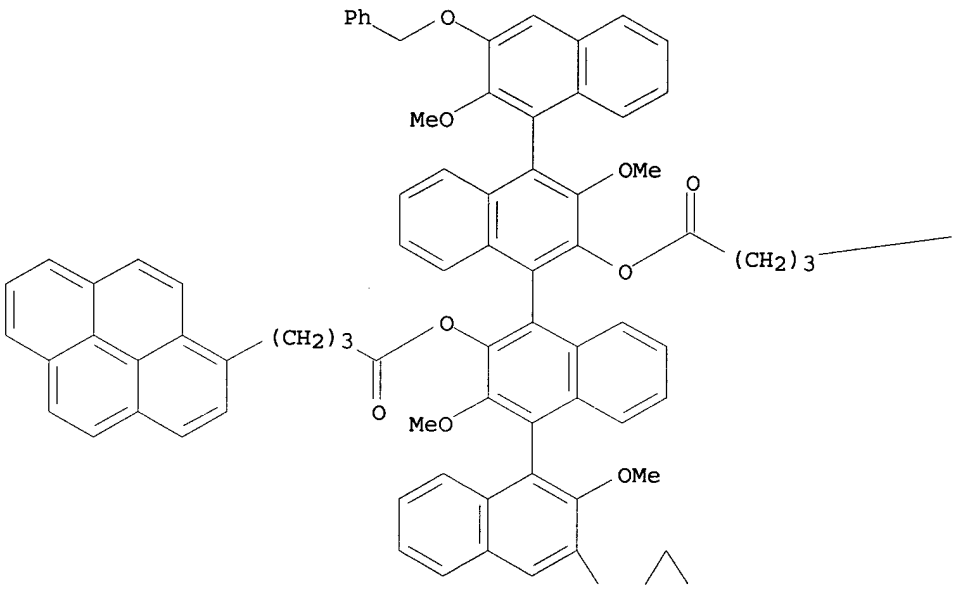
PAGE 1-A



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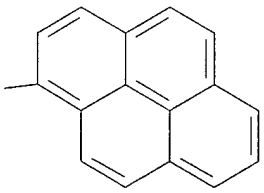

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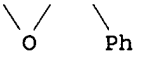
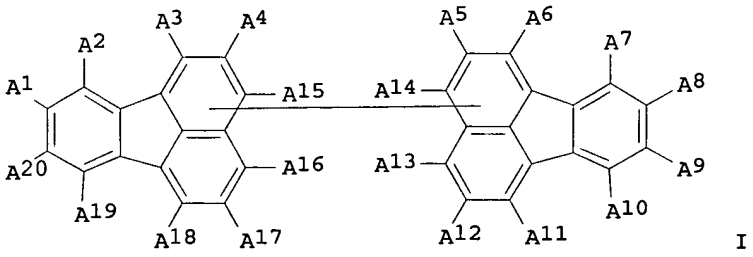


CC 73-4 (**Optical**, Electron, and Mass Spectroscopy and Other Related Properties)
Section cross-reference(s): 22
IT 70570-29-5 **651026-26-5 651026-29-8 651026-32-3 651026-37-8 651299-89-7** 656832-08-5
RL: PEP (Physical, engineering or chemical process); PRP (Properties); PYP (Physical process); PROC (Process)
(of oligo(dioxyfunctionalized)naphthalenes)
REFERENCE COUNT: 22 THERE ARE 22 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L54 ANSWER 2 OF 51 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2005:979216 HCAPLUS
DOCUMENT NUMBER: 143:275302
TITLE: Organic luminescent material for organic **electroluminescent** device
INVENTOR(S): Matsunami, Shigeyuki; Takada, Kazunori
PATENT ASSIGNEE(S): Sony Corp., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 27 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

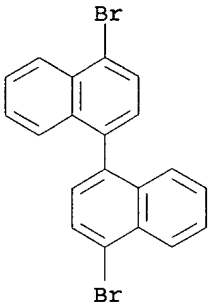
| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| JP 2005240008 | A2 | 20050908 | JP 2004-280869 | 2004 0928 |
| PRIORITY APPLN. INFO.: | | | JP 2004-17910 A | 2004 0127 |

GI




I

AB The invention relates to an **organic luminescent** material, suited for used in an organic **electroluminescent** device, represented by I [A1-20 = N, halo, OH, C≤20 carboxyl, C<20 carboxylate, C≤20 alkyl, C≤20 alkenyl, C≤20 alkoxy, C≤30 aryl, C≤30 heterocyclic, CN, NO2, and SiH3].
IT **49610-35-7**
RL: RCT (Reactant); RACT (Reactant or reagent)
(**organic luminescent** material for **org**
. **electroluminescent** device)
RN 49610-35-7 HCAPLUS
CN 1,1'-Binaphthalene, 4,4'-dibromo- (9CI) (CA INDEX NAME)




IC ICM C09K011-06
ICS H05B033-14
CC 73-11 (**Optical**, Electron, and Mass Spectroscopy and Other Related Properties)
Section cross-reference(s): 25
ST **org luminescent** material bifluoranthene **electroluminescent** device
IT **Electroluminescent** devices
Fluorescent substances
(**organic luminescent** material for **org** . **electroluminescent** device)
IT 18351-87-6P, 3,3'-Bifluoranthene 863878-54-0P, 8,8'-Bifluoranthene 863878-55-1P, 2,2'-Bifluoranthene 863878-56-2P 863878-60-8P 863878-63-1P
RL: DEV (Device component use); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)
(**organic luminescent** material for **org** . **electroluminescent** device)
IT 2969-58-6 13438-50-1 26885-42-7 49610-33-5 **49610-35-7** 73183-34-3 244205-40-1 851756-50-8 863878-57-3
RL: RCT (Reactant); RACT (Reactant or reagent)
(**organic luminescent** material for **org** . **electroluminescent** device)
IT 863878-53-9P 863878-58-4P 863878-59-5P 863878-61-9P 863878-62-0P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(**organic luminescent** material for **org** . **electroluminescent** device)

L54 ANSWER 3 OF 51 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2005:735143 HCAPLUS
DOCUMENT NUMBER: 143:202688
TITLE: Novel blue emitters for use in organic **electroluminescence** devices
INVENTOR(S): Coggan, Jennifer A.; Hu, Nan-Xing; Aziz, Hany
PATENT ASSIGNEE(S): Xerox Corporation, USA
SOURCE: U.S. Pat. Appl. Publ., 21 pp.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| US 2005175857 | A1 | 20050811 | US 2004-774577 | 2004 0209 |

applicant

JP 2005222948 A2 20050818 JP 2005-28449 2005 0204

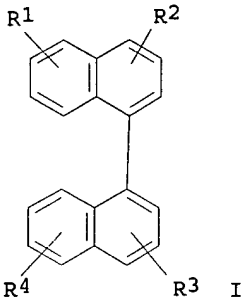
EP 1580250 A2 20050928 EP 2005-250649 2005 0204

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, PL, SK, BA, HR, IS, YU

PRIORITY APPLN. INFO.: US 2004-774577 A 2004 0209

current application

GI



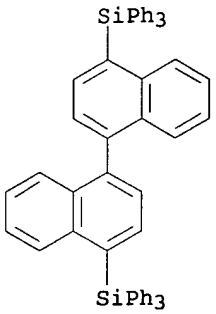

I

AB The invention refers to an **electroluminescent** (**EL**) is provided comprising an **anode**, an organic **electroluminescent** element, and a **cathode** wherein the **electroluminescent** element contains, for example, a fluorescent 1,1'-binaphthyl derivative component I [R1-4 = H, or C1-25 alkyl, C3-15 alicyclic alkyl, (un)C 6-30 substituted aryl, C atoms from 4 to 24 necessary to complete a fused aromatic ring of naphthalene, anthracene, perylene and the like, C3-15 alicyclic alkyl, Si which may be substituted with a tri-Me, diphenylmethyl, tri-Ph group and the like, C5-24 (un)substituted heteroaryl, C atoms necessary to complete a fused heteroarom. ring of furyl, thienyl, pyridyl, quinolinyl and other heterocyclic systems, C1-25 alkoxy, amino, alkyl amino or aryl amino, halo, cyano, and the like].

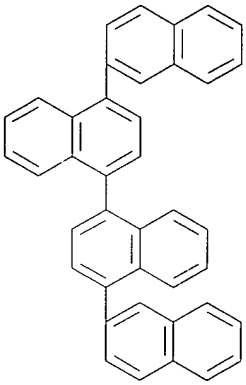
IT **676553-38-1P 861909-12-8P**, 2,1':4',1'':4'',2'''-Quaternaphthalene
RL: DEV (Device component use); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)
(novel blue emitters for use in organic **electroluminescence** devices)

RN 676553-38-1 HCAPLUS

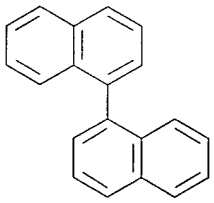
CN Silane, [1,1'-binaphthalene]-4,4'-diylbis[triphenyl- (9CI) (CA INDEX NAME)



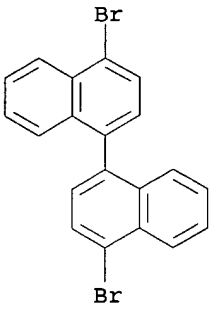

RN 861909-12-8 HCAPLUS
CN 2,1':4',1'':4'',2'''-Quaternaphthalene (9CI) (CA INDEX NAME)



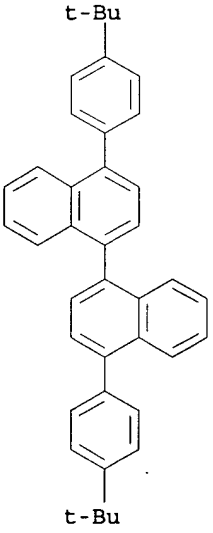
IT **604-53-5**, 1,1'-Binaphthalene
RL: RCT (Reactant); RACT (Reactant or reagent)
(novel blue emitters for use in organic **electroluminescence** devices)
RN 604-53-5 HCAPLUS
CN 1,1'-Binaphthalene (9CI) (CA INDEX NAME)



IT **49610-35-7P**, 4,4'-Dibromo-1,1'-binaphthyl
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(novel blue emitters for use in organic **electroluminescence** devices)
RN 49610-35-7 HCAPLUS
CN 1,1'-Binaphthalene, 4,4'-dibromo- (9CI) (CA INDEX NAME)




IT **861909-11-7P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(novel blue emitters for use in organic **electroluminescence** devices)
RN 861909-11-7 HCAPLUS
CN 1,1'-Binaphthalene, 4,4'-bis[4-(1,1-dimethylethyl)phenyl]- (9CI) (CA INDEX NAME)




IC ICM H05B033-14
INCL 428690000; 428917000; 313504000; 313506000; 257103000
CC 73-11 (**Optical**, Electron, and Mass Spectroscopy and Other Related Properties)
ST **electroluminescence** device binaphthyl fluorescent material
IT **Electroluminescent** devices
Fluorescent substances
(novel blue emitters for use in organic **electroluminescence** devices)
IT **676553-38-1P 861909-12-8P**, 2,1':4',1'':4'',2'''-Quaternaphthalene
RL: DEV (Device component use); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)
(novel blue emitters for use in organic **electroluminescence** devices)
IT 76-86-8, Triphenylsilyl chloride **604-53-5**, 1,1'-Binaphthalene 7726-95-6, Bromine, reactions 32316-92-0, 2-Naphthalene boronic acid 123324-71-0, 4-tert-Butylphenyl

boronic acid
RL: RCT (Reactant); RACT (Reactant or reagent)
(novel blue emitters for use in organic **electroluminescence** devices)

IT **49610-35-7P**, 4,4'-Dibromo-1,1'-binaphthyl
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(novel blue emitters for use in organic **electroluminescence** devices)

IT **861909-11-7P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(novel blue emitters for use in organic **electroluminescence** devices)

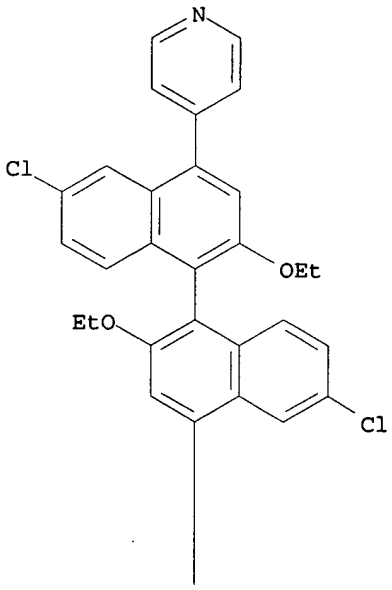
L54 ANSWER 4 OF 51 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2005:623673 HCAPLUS
DOCUMENT NUMBER: 143:277631
TITLE: A chiral porous 3D metal-organic framework with an unprecedented 4-connected network topology
AUTHOR(S): Wu, Chuan-De; Lin, Wenbin
CORPORATE SOURCE: Department of Chemistry, University of North Carolina, Chapel Hill, NC, 27599, USA
SOURCE: Chemical Communications (Cambridge, United Kingdom) (2005), (29), 3673-3675
CODEN: CHCOFS; ISSN: 1359-7345
PUBLISHER: Royal Society of Chemistry
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 143:277631

AB A novel homochiral 3-dimensional metal-organic framework [CdL2(H2O)2][ClO4]2·2DMF·3EtOH·5/3H2O (1, L = (R)-6,6'-dichloro-2,2'-diethoxy-1,1'-binaphthyl-4,4'-bipyridine) was prepared and characterized by x-ray crystallog. and IR spectroscopy. 1 Exhibits an unprecedented 4-connected network topol. owing to the cis-configuration of the Cd coordination and possesses permanent porosity as demonstrated by TGA, XRPD, and CO2 adsorption isotherm studies.

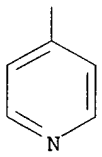
IT **431043-34-4**, (R)-6,6'-Dichloro-2,2'-diethoxy-1,1'-binaphthyl-4,4'-bipyridine
RL: RCT (Reactant); RACT (Reactant or reagent)
(reactant for preparation of cadmium dichlorodiethoxybinaphthylbipyridine aqua homochiral 3-dimensional metal-organic framework polymer complex with 4-connected network topol. and permanent porosity)

RN 431043-34-4 HCAPLUS
CN Pyridine, 4,4'-[(1R)-6,6'-dichloro-2,2'-diethoxy[1,1'-binaphthalene]-4,4'-diyl]bis- (9CI) (CA INDEX NAME)

PAGE 1-A




PAGE 2-A




CC 78-7 (Inorganic Chemicals and Reactions)
Section cross-reference(s): 66, 75
IT **431043-34-4**, (R)-6,6'-Dichloro-2,2'-diethoxy-1,1'-binaphthyl-4,4'-bipyridine
RL: RCT (Reactant); RACT (Reactant or reagent)
(reactant for preparation of cadmium dichlorodiethoxybinaphthylbipyridine aqua homochiral 3-dimensional metal-organic framework polymer complex with 4-connected network topol. and permanent porosity)
REFERENCE COUNT: 27 THERE ARE 27 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

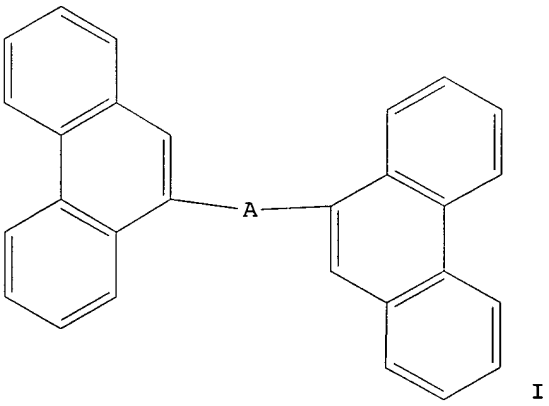
L54 ANSWER 5 OF 51 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2005:591930 HCAPLUS
DOCUMENT NUMBER: 143:122849
TITLE: Organic **electroluminescent** devices employing diphenanthryl-substituted material as hole blocking layer with improved stability
INVENTOR(S): Seo, Jeong Dae; Park, Chun Gun; Jeong, Hyun Cheol; Lee, Kyung Hoon
PATENT ASSIGNEE(S): Lg Electronics Inc., S. Korea
SOURCE: U.S. Pat. Appl. Publ., 11 pp.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| US 2005146268 | A1 | 20050707 | US 2005-28734 | 2005 0105 |
| EP 1553155 | A1 | 20050713 | EP 2004-31026 | 2004 1230 |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, PL, SK, BA, HR, IS, YU | | | | |
| CN 1638573 | A | 20050713 | CN 2005-10000191 | 2005 0106 |
| JP 2005197262 | A2 | 20050721 | JP 2005-1603 | 2005 0106 |

PRIORITY APPLN. INFO.: KR 2004-624 A 2004 0106

GI



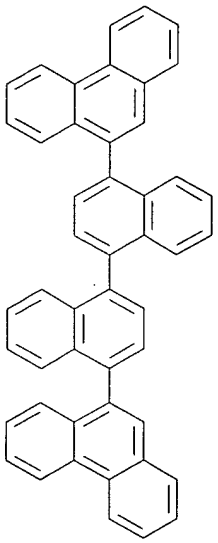

I

AB An organic **electroluminescence** device is disclosed which comprises an emitting layer and a hole blocking layer disposed between an electron injecting **electrode** (**cathode**) and a hole injecting **electrode** (**anode**), the material for the hole blocking layer being expressed by the chemical formula (I) where A is selected from the group consisting of a substituted or non-substituted aromatic group and a hetero ring group.

IT **857293-45-9**
RL: DEV (Device component use); USES (Uses)
(organic **electroluminescent** devices employing diphenanthryl-substituted material as hole blocking layer with improved stability)

RN 857293-45-9 HCAPLUS

CN Phenanthrene, 9,9'-[1,1'-binaphthalene]-4,4'-diylbis- (9CI) (CA INDEX NAME)



IC ICM H01J063-04
INCL 313506000
CC 73-11 (**Optical**, Electron, and Mass Spectroscopy and Other Related Properties)
Section cross-reference(s): 22, 76
ST org **electroluminescent** device diphenanthryl hole blocking
IT **Electroluminescent** devices
(organic **electroluminescent** devices employing diphenanthryl-substituted material as hole blocking layer with improved stability)
IT 2085-33-8, Aluminum tris(8-hydroxyquinolinato) 58328-31-7, CBP 123847-85-8, NPD 331749-28-1 722498-56-8 857293-30-2 857293-31-3 857293-32-4 857293-33-5 857293-34-6 857293-35-7 857293-36-8 857293-37-9 857293-38-0 857293-39-1 857293-40-4 857293-41-5 857293-42-6 857293-43-7 857293-44-8 **857293-45-9** 857293-46-0 857293-47-1 857293-48-2 857293-49-3 857293-50-6 857293-51-7 857293-53-9 857293-54-0
RL: DEV (Device component use); USES (Uses)
(organic **electroluminescent** devices employing diphenanthryl-substituted material as hole blocking layer with improved stability)
IT 359014-72-5
RL: DEV (Device component use); MOA (Modifier or additive use); USES (Uses)
(organic **electroluminescent** devices employing diphenanthryl-substituted material as hole blocking layer with improved stability)
IT 857293-29-9P 857293-52-8P
RL: DEV (Device component use); PRP (Properties); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)
(organic **electroluminescent** devices employing diphenanthryl-substituted material as hole blocking layer with improved stability)

L54 ANSWER 6 OF 51 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2005:540633 HCAPLUS
DOCUMENT NUMBER: 143:68043
TITLE: Use of platinum II complexes as luminescent materials in organic **light-emitting** diodes (**OLEDs**)
INVENTOR(S): Lennartz, Christian; Vogler, Arnd; Pawlowski,

Valeri
PATENT ASSIGNEE(S): BASF Aktiengesellschaft, Germany
SOURCE: PCT Int. Appl., 30 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| WO 2005056712 | A1 | 20050623 | WO 2004-EP13944 | 2004 1208 |
| DE 10358665 | A1 | 20050707 | DE 2003-10358665 | 2003 1212 |

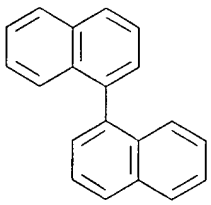
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.: DE 2003-10358665 A 2003 1212

OTHER SOURCE(S): MARPAT 143:68043

AB The use is described of neutral platinum II complexes of bidentate (hetero)arylphosphine derivs., o-phenanthroline derivs, and bipyridyl derivs. as emitter mols. in organic **light-emitting** diodes (**OLEDs**). The use of the platinum II complexes as a **light-emitting** layer in **OLEDs**, a **light-emitting** layer containing ≥1 platinum II complex, an **OLED** containing the **light-emitting** layer, and devices, especially displays, comprising the **OLEDs** are also described.

IT **604-53-5**, 1,1'-Binaphthalene
RL: RCT (Reactant); RACT (Reactant or reagent)
(platinum complex **luminescent** materials in **organic light-emitting** diodes)
RN 604-53-5 HCAPLUS
CN 1,1'-Binaphthalene (9CI) (CA INDEX NAME)



IC ICM C09K011-06
ICS H01L051-30
CC 73-5 (**Optical**, Electron, and Mass Spectroscopy and Other Related Properties)

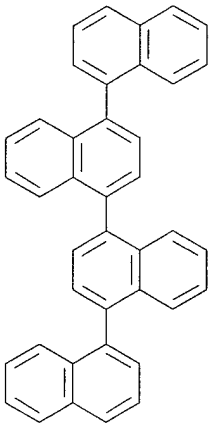
Section cross-reference(s): 74, 76, 78
ST org **light emitting** diode platinum complex luminescent material
IT **Electroluminescent** devices
(displays, **organic**; platinum complex **luminescent** materials in **organic light-emitting** diodes)
IT **Luminescent** screens
(**electroluminescent, organic**; platinum complex **luminescent** materials in **organic light -emitting** diodes)
IT **Electroluminescent** devices
(**organic**; platinum complex **luminescent** materials in **organic light-emitting** diodes)
IT Luminescent substances
(platinum complex **luminescent** materials in **organic light-emitting** diodes)
IT 592-06-3, Platinum dicyanide **604-53-5**, 1,1'-Binaphthalene 1662-01-7, 4,7-Diphenyl-1,10-phenanthroline 13991-08-7, 1,2-Bis(diphenylphosphino)benzene 72914-19-3
RL: RCT (Reactant); RACT (Reactant or reagent)
(platinum complex **luminescent** materials in **organic light-emitting** diodes)
IT 127793-58-2P 134494-09-0P 850449-34-2P 850449-35-3P
RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(platinum complex **luminescent** materials in **organic light-emitting** diodes)
REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L54 ANSWER 7 OF 51 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2005:57666 HCAPLUS
DOCUMENT NUMBER: 142:165277
TITLE: Organic **electroluminescent** devices containing oligonaphthalene compounds and showing stable blue emission
INVENTOR(S): Takada, Kazunori; Sakamoto, Hidesaku; Ichimura, Mari; Tamura, Shinichiro
PATENT ASSIGNEE(S): Sony Corp., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 17 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

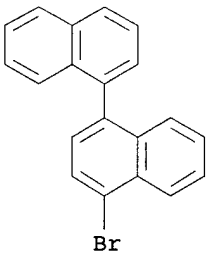
| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| JP 2005019219 | A2 | 20050120 | JP 2003-182779 | 2003 0626 |
| PRIORITY APPLN. INFO.: | | | JP 2003-182779 | 2003 0626 |

OTHER SOURCE(S): MARPAT 142:165277
AB The devices, showing long service life and high luminescent efficiency, have emitting layers containing [C1-4 alkyl(oxy)- and/or amino-substituted] di-, tri-, and/or tetranaphthalene compds.
IT **828269-29-0P**, 1,1':4',1'':4'',1'''-Quaternaphthalene
RL: DEV (Device component use); IMF (Industrial manufacture); PREP (Preparation); USES (Uses)

(emitting layers; organic **electroluminescent** devices containing oligonaphthalene compds. and showing stable blue emission)
RN 828269-29-0 HCAPLUS
CN 1,1':4',1'':4'',1'''-Quaternaphthalene (9CI) (CA INDEX NAME)



IT **49610-33-5**, 4-Bromo-1,1'-binaphthalene
RL: RCT (Reactant); RACT (Reactant or reagent)
(organic **electroluminescent** devices containing oligonaphthalene compds. and showing stable blue emission)
RN 49610-33-5 HCAPLUS
CN 1,1'-Binaphthalene, 4-bromo- (9CI) (CA INDEX NAME)




IC ICM H05B033-14
ICS C09K011-06; H05B033-22; C07C015-24; C07C211-58
CC 73-11 (**Optical**, Electron, and Mass Spectroscopy and Other Related Properties)
Section cross-reference(s): 25
ST oligonaphthalene blue emitting **org** LED **luminescent** efficiency
IT **Electroluminescent** devices
(blue-emitting; organic **electroluminescent** devices containing oligonaphthalene compds. and showing stable blue emission)
IT Luminescent substances
(**electroluminescent**, blue-emitting; organic **electroluminescent** devices containing oligonaphthalene compds. and showing stable blue emission)
IT 828269-25-6 828269-26-7 828269-27-8 828269-28-9
RL: DEV (Device component use); USES (Uses)
(emitting layers; organic **electroluminescent** devices containing oligonaphthalene compds. and showing stable blue emission)

IT 647836-55-3P, 2,2':6',2'':6'',2'''-Quaternaphthalene
**828269-29-0P**, 1,1':4',1'':4'',1'''-Quaternaphthalene
828269-30-3P
RL: DEV (Device component use); IMF (Industrial manufacture); PREP (Preparation); USES (Uses)
(emitting layers; organic **electroluminescent** devices containing oligonaphthalene compds. and showing stable blue emission)

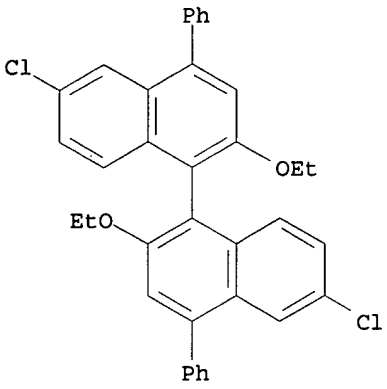
IT 32316-92-0 **49610-33-5**, 4-Bromo-1,1'-binaphthalene
62156-75-6, 6-Bromo-2,2'-binaphthalene 817210-34-7
RL: RCT (Reactant); RACT (Reactant or reagent)
(organic **electroluminescent** devices containing oligonaphthalene compds. and showing stable blue emission)

L54 ANSWER 8 OF 51 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2005:41368 HCAPLUS
DOCUMENT NUMBER: 142:261248
TITLE: Development of 4,4'-substituted-XylBINAP ligands for highly enantioselective hydrogenation of ketones
AUTHOR(S): Ngo, Helen L.; Lin, Wenbin
CORPORATE SOURCE: Department of Chemistry, University of North Carolina, Chapel Hill, NC, 27599, USA
SOURCE: Journal of Organic Chemistry (2005), 70(4), 1177-1187
CODEN: JOCEAH; ISSN: 0022-3263
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English

AB A family of 4,4'-substituted-xylBINAPs was synthesized in multistep sequences and characterized by NMR spectroscopy and mass spectrometry. Ru(diphosphine)(diamine)Cl2 complexes based on these 4,4'-substituted-xylBINAPs and chiral diamines (DPEN and DAIPEN) were synthesized by treatment of [(benzene)RuCl2]2 with 4,4'-substituted-xylBINAP followed by chiral diamine, and characterized by 1H and 31P NMR spectroscopy and mass spectrometry. These Ru complexes were used for asym. hydrogenation of aromatic ketones in a highly enantioselective manner with complete conversion. With very low catalyst loading, complete conversion and excellent enantioselectivity obtained for most of the aromatic ketones examined A single-crystal X-ray diffraction study of Ru[(R)-L4][(R,R)-DPEN]Cl2 indicated that the 4-Me group of the naphthyl ring and the Me groups of the two xylyl moieties form a fence on the opposite side of the DPEN ligand of the Ru center. These three Me groups will have significant repulsive interactions with the bulky aryl ring of the hydrogen-bonded aromatic ketone in the disfavored transition state. These results supported the hypothesis of combining dual modes of enantiocontrol (i.e., the substituents on 4,4'-positions of the binaphthyl framework and the Me groups on the bis(xylyl)phosphino moieties) to achieve higher stereoselectivity in the hydrogenation of aromatic ketones.

IT **846606-59-5P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation of dichloro(diphenyl)BINOL triflate via cross-coupling of diethoxy(tetrahalo)binaphthyl with phenylboronic acid followed by hydrolysis and triflation in the preparation of substituted XylBINAP ligands)

RN 846606-59-5 HCAPLUS
CN 1,1'-Binaphthalene, 6,6'-dichloro-2,2'-diethoxy-4,4'-diphenyl-, (1R)- (9CI) (CA INDEX NAME)

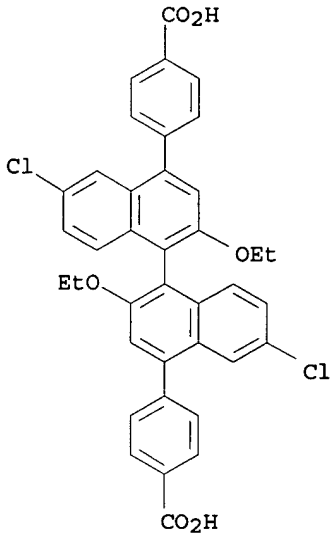



CC 25-7 (Benzene, Its Derivatives, and Condensed Benzenoid Compounds)
Section cross-reference(s): 75, 78
IT **846606-59-5P** 846606-60-8P 846606-61-9P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation of dichloro(diphenyl)BINOL triflate via cross-coupling of diethoxy(tetrahalo)binaphthyl with phenylboronic acid followed by hydrolysis and triflation in the preparation of substituted XylBINAP ligands)
REFERENCE COUNT: 34 THERE ARE 34 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

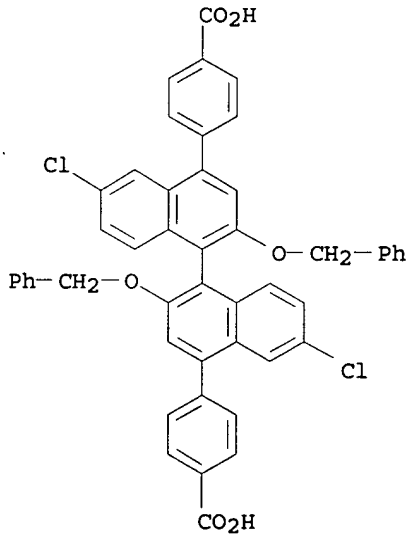
L54 ANSWER 9 OF 51 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2005:9066 HCAPLUS
DOCUMENT NUMBER: 142:282750
TITLE: Highly interpenetrated metal-organic frameworks for hydrogen storage
AUTHOR(S): Kesanli, Banu; Cui, Yong; Smith, Milton R.; Bittner, Edward W.; Brockrath, Bradley C.; Lin, Wenbin
CORPORATE SOURCE: Department of Chemistry, CB#3290, University of North Carolina, Chapel Hill, NC, 27599, USA
SOURCE: Angewandte Chemie, International Edition (2004), Volume Date 2005, 44(1), 72-75
CODEN: ACIEF5; ISSN: 1433-7851
PUBLISHER: Wiley-VCH Verlag GmbH & Co. KGaA
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 142:282750
AB Highly interpenetrating metal-organic frameworks were synthesized from zinc salts (i.e., Zn(ClO4)2 or ZnI2) and aromatic-rich dicarboxylic acids (i.e., 6,6'-dichloro-2,2'-diethoxy-1,1'-binaphthyl-4,4'-dibenzoic acid (I) and 6,6'-dichloro-2,2'-dibenzyloxy-1,1'-binaphthyl-4,4-dibenzoic acid (II)), to form crystalline materials of general structures [Zn4(μ4-O)(I)3(DMF)2].4DMF.3MeOH.2H2O and [Zn4(μ4-O)(II)3].5DMF.5EtOH.H2O. These materials, with single-crystal x-ray diffraction patterns that suggest a fourfold three-dimensional interpenetrating networks, have hydrogen uptakes comparable to those of the best carbon nanotubes. The mechanism of hydrogen uptake seems to be favored by the proximity of aromatic rings.
IT **847237-14-3P 847237-15-4P 860004-93-9P 860005-02-3P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(synthesis of and zinc salt formation from; zinc

naphthalenecarboxylate-based highly interpenetrating frameworks for enhanced hydrogen storage)

RN 847237-14-3 HCAPLUS
CN Benzoic acid, 4,4'-(6,6'-dichloro-2,2'-diethoxy[1,1'-binaphthalene]-4,4'-diyl)bis- (9CI) (CA INDEX NAME)

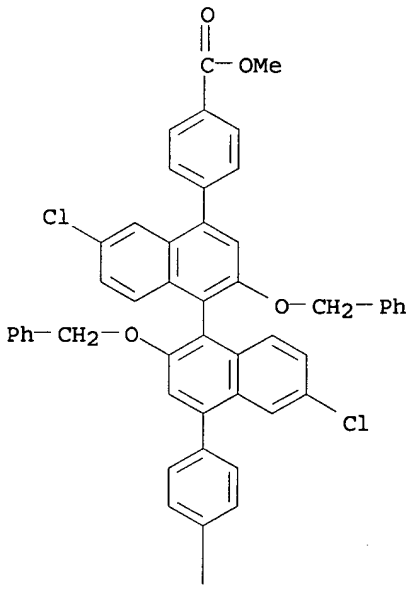



RN 847237-15-4 HCAPLUS
CN Benzoic acid, 4,4'-[6,6'-dichloro-2,2'-bis(phenylmethoxy)[1,1'-binaphthalene]-4,4'-diyl]bis- (9CI) (CA INDEX NAME)

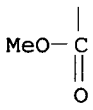



RN 860004-93-9 HCAPLUS
CN Benzoic acid, 4,4'-[6,6'-dichloro-2,2'-bis(phenylmethoxy)[1,1'-binaphthalene]-4,4'-diyl]bis-, dimethyl ester (9CI) (CA INDEX NAME)

PAGE 1-A

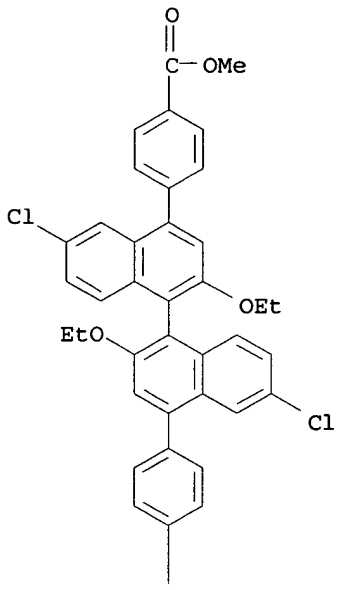



PAGE 2-A

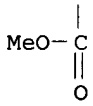



RN 860005-02-3 HCAPLUS
CN Benzoic acid, 4,4'-(6,6'-dichloro-2,2'-diethoxy[1,1'-binaphthalene]-4,4'-diyl)bis-, dimethyl ester (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 2-A



CC 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)
Section cross-reference(s): 78
IT **847237-14-3P 847237-15-4P 860004-93-9P**
**860005-02-3P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(synthesis of and zinc salt formation from; zinc naphthalenecarboxylate-based highly interpenetrating frameworks for enhanced hydrogen storage)
REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L54 ANSWER 10 OF 51 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2004:1014710 HCAPLUS
DOCUMENT NUMBER: 142:13465
TITLE: Charge transporting material for **electroluminescent** device
INVENTOR(S): Takeuchi, Masako; Shiotani, Takeshi; Fugono, Masayo
PATENT ASSIGNEE(S): Mitsubishi Chemical Corp., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 48 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

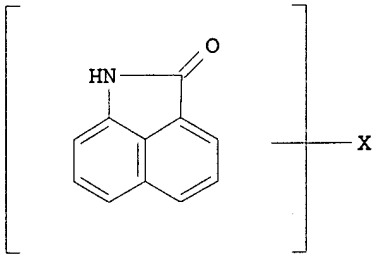
| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|

| | | | | |
|---|---|---|---|---|
| JP 2004335415 | A2 | 20041125 | JP 2003-133434 | 2003 0512 |

PRIORITY APPLN. INFO.: JP 2003-133434 2003 0512

OTHER SOURCE(S): MARPAT 142:13465

GI



I

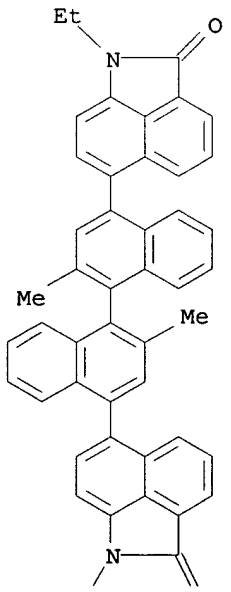
AB Disclosed is a charge transporting material for an **electroluminescent** device, represented by I [X = n valent connecting group bonded to C and N atoms of lactam structure; and n = 2 or 3].

IT **797035-62-2P**
RL: DEV (Device component use); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)
(charge transporting material for **electroluminescent** device)

RN 797035-62-2 HCAPLUS

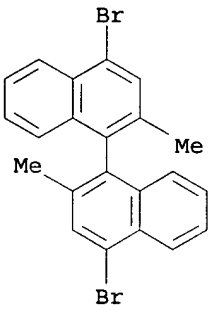
CN Benz[cd]indol-2(1H)-one, 6,6'-(2,2'-dimethyl[1,1'-binaphthalene]-4,4'-diyl)bis[1-ethyl- (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 2-A

IT **797035-61-1**
RL: RCT (Reactant); RACT (Reactant or reagent)
(charge transporting material for **electroluminescent** device)
RN 797035-61-1 HCAPLUS
CN 1,1'-Binaphthalene, 4,4'-dibromo-2,2'-dimethyl- (9CI) (CA INDEX NAME)



IC ICM H05B033-22
ICS C09K011-06; H05B033-14
CC 73-11 (**Optical**, Electron, and Mass Spectroscopy and Other Related Properties)
ST lactam charge transporting material **electroluminescent** device
IT **Electroluminescent** devices
(charge transporting material for **electroluminescent** device)
IT Lactams
RL: DEV (Device component use); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)
(charge transporting material for **electroluminescent** device)
IT **797035-62-2P**
RL: DEV (Device component use); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)
(charge transporting material for **electroluminescent** device)
IT 41503-32-6 73183-34-3 **797035-61-1**
RL: RCT (Reactant); RACT (Reactant or reagent)
(charge transporting material for **electroluminescent** device)
IT 797035-60-0P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(charge transporting material for **electroluminescent** device)

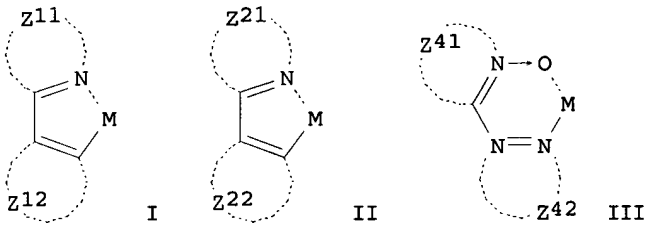
L54 ANSWER 11 OF 51 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2004:739385 HCAPLUS
DOCUMENT NUMBER: 141:268179
TITLE: Long-life white-emitting organic **electroluminescent** devices, displays,

illumination apparatus, and electric appliances therewith
INVENTOR(S): Fukuda, Mitsuhiro; Genda, Kazuo
PATENT ASSIGNEE(S): Konica Minolta Holdings, Inc., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 577 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| JP 2004253298 | A2 | 20040909 | JP 2003-43860 | 2003 0221 |

PRIORITY APPLN. INFO.: JP 2003-43860 2003 0221

OTHER SOURCE(S): MARPAT 141:268179
GI

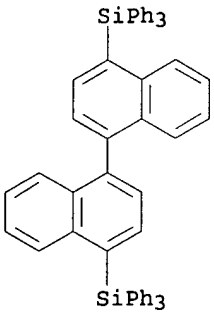



AB The devices have, in their constituent layers (e.g., emitting layers, hole- or electron-transporting layers), (i) compds. represented by X1R1C:CR2X2 [X1, X2 = aryl, heterocycle; R1, R2 = aryl, heterocyclic hydrocarbyl, cycloalkoxy (R1 = R2 = aryl)], R11R12R13R14R15P (R11-R15 = monovalent substituent), Ar2Ar1C6H4(m-Ar1Ar2) [Ar1 = bivalent aromatic hydrocarbylene; Ar2 = (substituted) Ph; H atom on the benzene ring may be substituted with (cyclo)alkyl, alkoxy, or halo], Z(ArQ)n [Q = (substituted) o-(2-pyridyl)phenyl; Z = n-valent bridging group, single bond; Ar = bivalent arylene; n = 2-8], etc., (ii) fluorescent compds. with mol. weight 500-2000 and atomic ratio F/(F + H) 0-0.9 and having fluorescent peak at ≤415 nm, (iii) polysilanes (R21R22Si)n [R21, R22 = alkyl(oxy), aromatic group, aryloxy; n1 ≥3] or [R31(Ar31NR32R33)Si]n [R31 = alkyl(oxy), aromatic group, aryloxy; R32, R33 = alkyl, aromatic group; Ar31 = arylene; n2 ≥3], and/or (iv) fluorescent compds. satisfying atomic ratio N/C 0-0.05. The devices, having phosphorescent dopants I (Z11 = aromatic azacycle; Z12 = nonarom. ring, 5-membered aromatic ring, azulene; M = metal), II (Z21, Z22 = aromatic azacycle; M = metal), or III (Z41 = azacycle; Z42 = ring; M = metal) in emitting layers, are also claimed. The devices exhibit high luminescent efficiency and substantially white emission, and are suited for light source uses, especially of LCD.

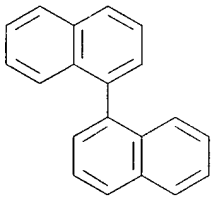
IT **676553-38-1**
RL: DEV (Device component use); USES (Uses)
(long-life white-emitting organic **LED** containing azacyclic phosphorescent dopants and showing high luminescent efficiency)

RN 676553-38-1 HCAPLUS
CN Silane, [1,1'-binaphthalene]-4,4'-diylbis[triphenyl- (9CI) (CA

INDEX NAME)




IT **604-53-5P**, 1,1'-Binaphthalene
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)
(long-life white-emitting organic **LED** containing azacyclic phosphorescent dopants and showing high luminescent efficiency)
RN 604-53-5 HCAPLUS
CN 1,1'-Binaphthalene (9CI) (CA INDEX NAME)



IC ICM H05B033-14
ICS C09K011-06; G02F001-1335; H05B033-22
CC 73-11 (**Optical**, Electron, and Mass Spectroscopy and Other Related Properties)
Section cross-reference(s): 25, 28, 29, 38, 74
ST white emitting **electroluminescent** life luminescent efficiency; phosphorescent azacyclic dopant **luminescent** efficiency **org** LED; LCD **light** source white **emitting** electrophosphorescent
IT Luminescent substances
(**electroluminescent**, electrophosphorescent, host-guest; long-life white-emitting organic **LED** containing azacyclic phosphorescent dopants and showing high luminescent efficiency)
IT Phosphorescent substances
(electrophosphorescent; long-life white-emitting organic **LED** containing azacyclic phosphorescent dopants and showing high luminescent efficiency)
IT Fluorescent substances
(fluorine- or nitrogen-containing; long-life white-emitting organic **LED** containing azacyclic phosphorescent dopants and showing high luminescent efficiency)
IT Liquid crystal displays
(light sources for; long-life white-emitting organic **LED** containing azacyclic phosphorescent dopants and showing high luminescent efficiency)
IT Electric apparatus
(long-life white-emitting organic **LED** containing azacyclic phosphorescent dopants and showing high luminescent efficiency)
IT Organometallic compounds

Polysilanes
RL: DEV (Device component use); USES (Uses)
(long-life white-emitting organic **LED** containing azacyclic phosphorescent dopants and showing high luminescent efficiency)

IT **Electroluminescent** devices
(white-emitting, electrophosphorescent; long-life white-emitting organic **LED** containing azacyclic phosphorescent dopants and showing high luminescent efficiency)

IT 71-43-2, Benzene, uses 159-68-2, 9,9'-Spirobi[9H-9-silafluorene]
346-02-1 752-28-3 1423-70-7 17742-49-3 18822-13-4
20156-53-0 32314-41-3 33861-11-9 35088-77-8 38186-32-2
54765-15-0 65181-79-5 122107-04-4 133942-93-5 139376-06-0
142289-08-5 203070-80-8 213621-16-0 219917-71-2
288581-17-9 300823-56-7 300823-57-8 301300-11-8
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478262-77-0 478262-78-1 478262-79-2 478370-42-2
492446-94-3 492446-97-6 497097-34-4 497097-36-6
511270-11-4 522630-08-6 522630-12-2 522630-19-9
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569674-90-4 569674-92-6 569674-94-8 569674-95-9
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650606-89-6 650606-91-0 650606-97-6 655236-05-8
655236-07-0 655236-12-7 655240-48-5 655240-49-6
663219-23-6 663219-25-8 663219-28-1 663219-29-2
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705973-76-8 705973-79-1 705973-80-4 705973-82-6
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722547-88-8 722547-89-9 754231-79-3 754231-80-6
754231-82-8 754231-83-9 754231-84-0 754231-87-3
754231-88-4 754231-89-5 754231-90-8 754231-91-9
754231-92-0 754231-94-2
RL: DEV (Device component use); USES (Uses)
(long-life white-emitting organic **LED** containing azacyclic phosphorescent dopants and showing high luminescent efficiency)

IT 5660-43-5P 51445-93-3P 115533-27-2P 174291-37-3P
288297-90-5P 344564-96-1P 522630-06-4P 522630-07-5P
557787-52-7P 567625-71-2P 567625-76-7P 567625-77-8P
569674-88-0P 569674-97-1P 643753-84-8P 669072-95-1P
676553-36-9P 705941-83-9P 754231-93-1P 754231-95-3P

754232-01-4P 754980-36-4P
RL: DEV (Device component use); IMF (Industrial manufacture); PREP (Preparation); USES (Uses)
(long-life white-emitting organic **LED** containing azacyclic phosphorescent dopants and showing high luminescent efficiency)

IT **604-53-5P**, 1,1'-Binaphthalene 5122-94-1P 16761-23-2P 19264-73-4P 33170-68-2P 49610-33-5P 50668-21-8P, 3-Iodo-9-ethylcarbazole 77547-84-3P 85137-69-5P 103989-84-0P 121073-89-0P 146232-42-0P 155886-75-2P 155886-83-2P 263164-82-5P 288297-93-8P 288297-94-9P 288297-95-0P 357437-74-2P 363607-69-6P 522630-41-7P 522630-42-8P 567625-82-5P 567625-83-6P 643753-87-1P 643753-91-7P 754232-02-5P
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)
(long-life white-emitting organic **LED** containing azacyclic phosphorescent dopants and showing high luminescent efficiency)

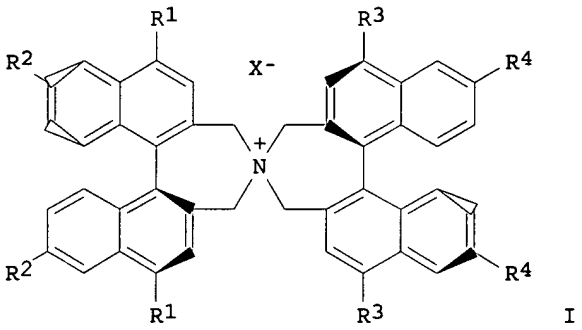
IT 62-53-3, Aniline, reactions 67-64-1, Acetone, reactions 76-86-8, Triphenylchlorosilane 86-74-8, Carbazole 90-11-9, 1-Bromonaphthalene 90-90-4, 4-Bromobenzophenone 92-66-0, 4-Bromobiphenyl 95-54-5, 1,2-Phenylenediamine, reactions 98-80-6, Phenylboronic acid 99-97-8, N,N-Dimethyl-p-tolylamine 100-20-9, Terephthaloyl dichloride 106-37-6, 1,4-Dibromobenzene 106-38-7, 4-Bromotoluene 108-36-1, 1,3-Dibromobenzene 108-94-1, Cyclohexanone, reactions 108-98-5, Thiophenol, reactions 110-13-4, 2,5-Hexanedione 119-61-9, Benzophenone, reactions 119-93-7 121-43-7, Trimethoxyborane 132-32-1, 3-Amino-9-ethylcarbazole 302-01-2, Hydrazine, reactions 495-71-6, 1,2-Dibenzoylethane 523-27-3, 9,10-Dibromoanthracene 583-53-9, 1,2-Dibromobenzene 619-42-1, Methyl 4-bromobenzoate 623-27-8, 1,4-Diformylbenzene 624-92-0, Dimethyl disulfide 626-19-7, 1,3-Benzenedicarboxaldehyde 762-04-9, Diethyl phosphite 826-81-3, 2-Methyl-8-quinolinol 885-39-2 931-50-0, Cyclohexylmagnesium bromide 1003-09-4, 2-Bromothiophene 1074-24-4, 2,5-Dibromo-p-xylene 1592-95-6, 3-BromoCarbazole 1730-04-7, 1,8-Diiodonaphthalene 1733-63-7 2586-62-1, 1-Bromo-2-methylnaphthalene 2592-73-6, 1,1-Dibromo-2,2-diphenylethylene 4546-04-7 6999-03-7, 1-Bromo-4-trimethylsilylbenzene 10489-97-1, 1,1-Dibromocyclohexane 38218-24-5, Indium isopropoxide 51044-13-4, 4-Bromobenzyltriphenylphosphonium bromide 65810-18-6, 1,3,5-Cycloheptatriene-1-carboxaldehyde 95902-10-6, 3-Bromobenzyltriphenylphosphonium bromide 643753-90-6 754232-00-3
RL: RCT (Reactant); RACT (Reactant or reagent)
(long-life white-emitting organic **LED** containing azacyclic phosphorescent dopants and showing high luminescent efficiency)

L54 ANSWER 12 OF 51 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2004:695455 HCAPLUS
DOCUMENT NUMBER: 141:207074
TITLE: Preparation of spirobi[(R)- or (S)-binaphthyldimethylammonium] derivatives and their use as phase-transfer catalysts for preparation of optically active α-amino acids
INVENTOR(S): Maruoka, Keiji
PATENT ASSIGNEE(S): Tosoh Corp., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 49 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|

| | | | | |
|---|---|---|---|---|
| JP 2004238362 | A2 | 20040826 | JP 2003-31361 | 2003 0207 |
| PRIORITY APPLN. INFO.: | | too new | JP 2003-31361 | 2003 0207 |

OTHER SOURCE(S): MARPAT 141:207074
GI

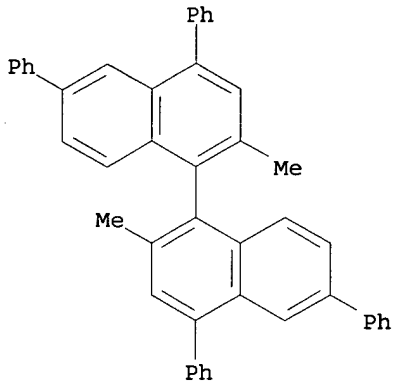



I

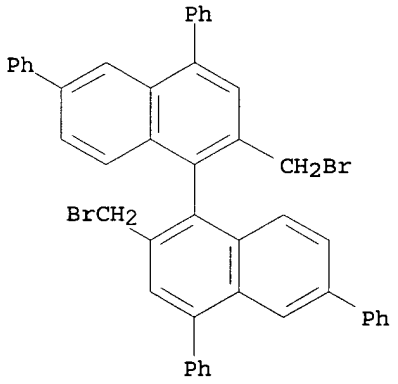
AB Title compds. I [R1-R4 = H, Me, Et, vinyl, ethynyl, C3-10 linear, branched, cyclic alkyl, C5-20 (halo)aryl, etc.; R1-R4 ≠ H; X = halo, thiocyanide, HSO4, ClO4, PF6] are prepared Their intermediates are also claimed. Thus, quaternization of (S)-1,1'-bi-2-bromomethyl-4-phenylnaphthyl with ammonia in a sealed tube gave 42% (S,S)-I (R1 = R3 = Ph, R2 = R4 = H, X = Br). Ph2C:NCH2CO2CMe3 was alkylated with PhCH2Br in PhMe in the presence of the ammonium salt and aqueous KOH at 0° for 6 h to give 86% (R)-Ph2C:NCH(CH2Ph)CO2CMe3 with 96% ee.

IT **583050-13-9P 583050-14-0P 583050-16-2P**
**583050-17-3P 583050-20-8P 583050-21-9P**
**596107-96-9P 596107-97-0P 596107-98-1P**
**727713-01-1P 743422-07-3P 743422-10-8P**
**743422-21-1P 743422-23-3P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation of optically active spirobi[binaphthyldimethylammonium] derivs. as phase-transfer catalysts for preparation of optically active amino acids)

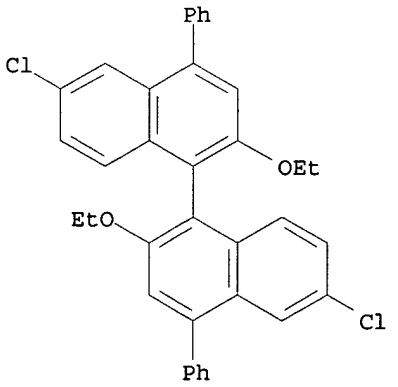
RN 583050-13-9 HCAPLUS
CN 1,1'-Binaphthalene, 2,2'-dimethyl-4,4',6,6'-tetraphenyl-, (1S)- (9CI) (CA INDEX NAME)



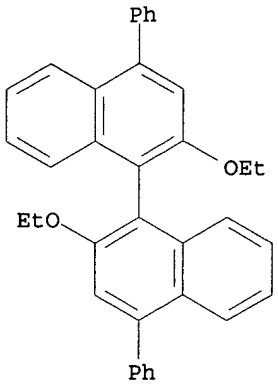

RN 583050-14-0 HCAPLUS
CN 1,1'-Binaphthalene, 2,2'-bis(bromomethyl)-4,4',6,6'-tetraphenyl-, (1S)- (9CI) (CA INDEX NAME)



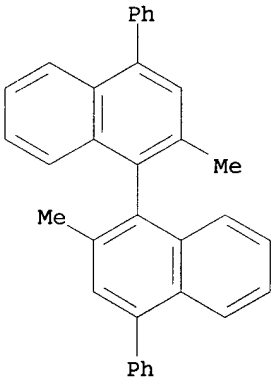

RN 583050-16-2 HCAPLUS
CN 1,1'-Binaphthalene, 6,6'-dichloro-2,2'-diethoxy-4,4'-diphenyl-, (1S)- (9CI) (CA INDEX NAME)



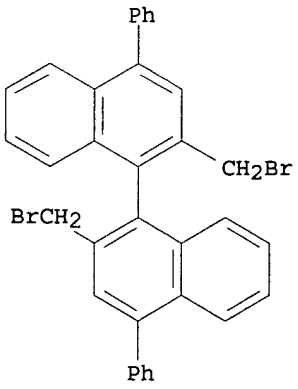

RN 583050-17-3 HCAPLUS
CN 1,1'-Binaphthalene, 2,2'-diethoxy-4,4'-diphenyl-, (1S)- (9CI) (CA INDEX NAME)




RN 583050-20-8 HCAPLUS
CN 1,1'-Binaphthalene, 2,2'-dimethyl-4,4'-diphenyl-, (1S)- (9CI) (CA INDEX NAME)

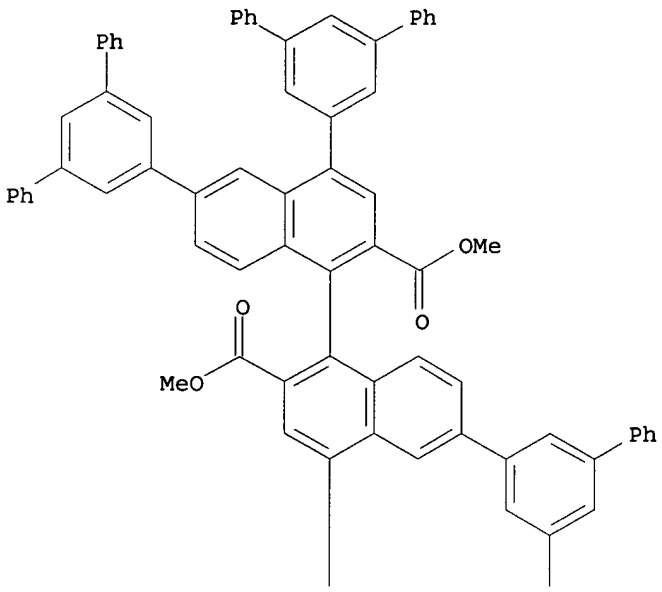



RN 583050-21-9 HCAPLUS
CN 1,1'-Binaphthalene, 2,2'-bis(bromomethyl)-4,4'-diphenyl-, (1S)- (9CI) (CA INDEX NAME)

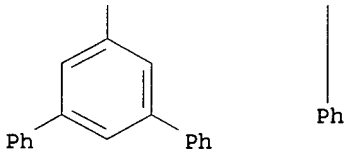



RN 596107-96-9 HCAPLUS
CN [1,1'-Binaphthalene]-2,2'-dicarboxylic acid, 4,4',6,6'-tetrakis([1,1':3',1''-terphenyl]-5'-yl)-, dimethyl ester, (1S)- (9CI) (CA INDEX NAME)

PAGE 1-A

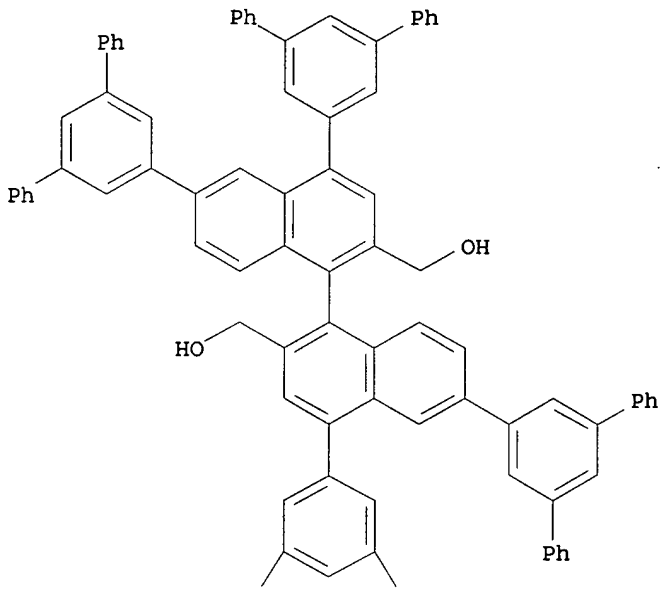



PAGE 2-A




RN 596107-97-0 HCAPLUS
CN [1,1'-Binaphthalene]-2,2'-dimethanol, 4,4',6,6'-tetrakis([1,1':3',1''-terphenyl]-5'-yl)-, (1S)- (9CI) (CA INDEX NAME)

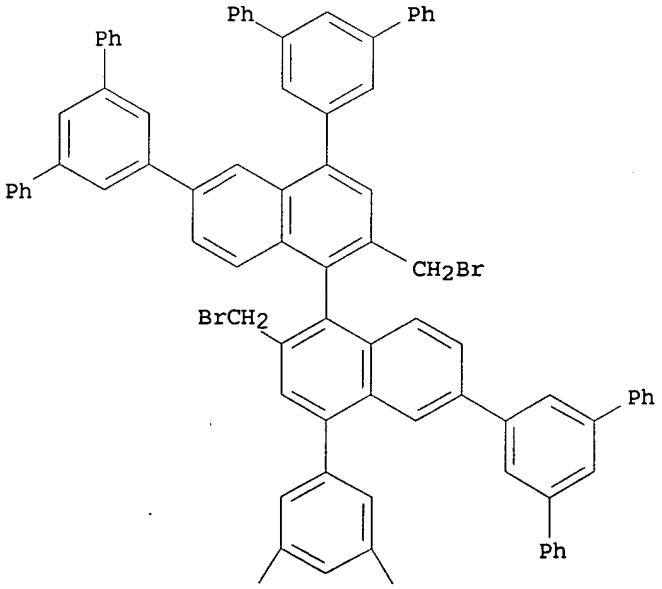
PAGE 1-A




PAGE 2-A


RN 596107-98-1 HCAPLUS
CN 1,1'-Binaphthalene, 2,2'-bis(bromomethyl)-4,4',6,6'-tetrakis([1,1':3',1''-terphenyl]-5'-yl)-, (1S)- (9CI) (CA INDEX NAME)

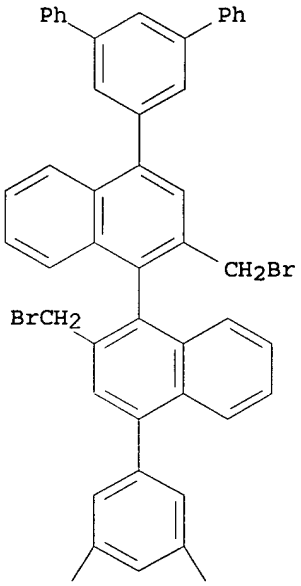
PAGE 1-A



PAGE 2-A


RN 727713-01-1 HCAPLUS
CN 1,1'-Binaphthalene, 2,2'-bis(bromomethyl)-4,4'-bis([1,1':3',1''-terphenyl]-5'-yl)-, (1S)- (9CI) (CA INDEX NAME)

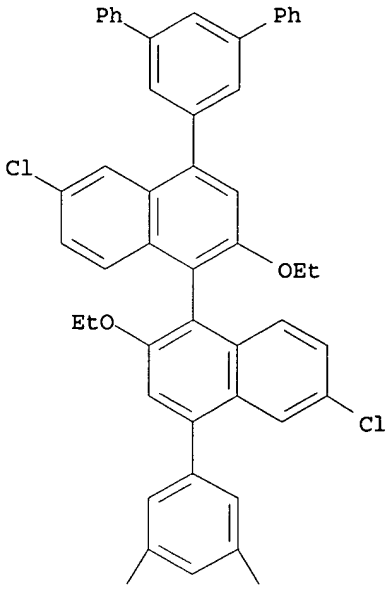
PAGE 1-A




PAGE 2-A


RN 743422-07-3 HCAPLUS
CN 1,1'-Binaphthalene, 6,6'-dichloro-2,2'-diethoxy-4,4'-bis([1,1':3',1''-terphenyl]-5'-yl)-, (1S)- (9CI) (CA INDEX NAME)

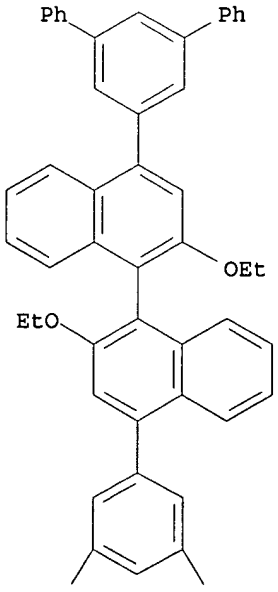
PAGE 1-A




PAGE 2-A


RN 743422-10-8 HCAPLUS
CN 1,1'-Binaphthalene, 2,2'-diethoxy-4,4'-bis([1,1':3',1''-terphenyl]-5'-yl)-, (1S)- (9CI) (CA INDEX NAME)

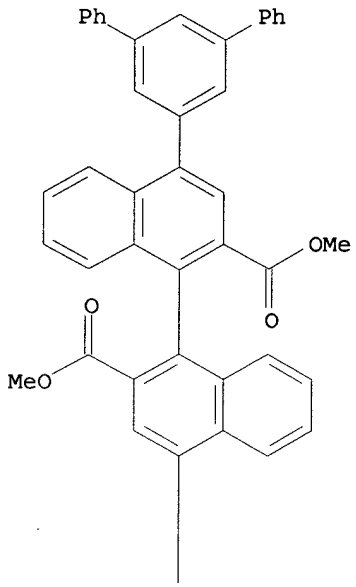
PAGE 1-A



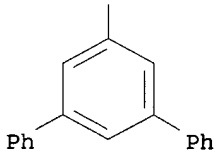
PAGE 2-A


RN 743422-21-1 HCAPLUS
CN [1,1'-Binaphthalene]-2,2'-dicarboxylic acid, 4,4'-bis([1,1':3',1''-terphenyl]-5'-yl)-, dimethyl ester, (1S)- (9CI) (CA INDEX NAME)

PAGE 1-A

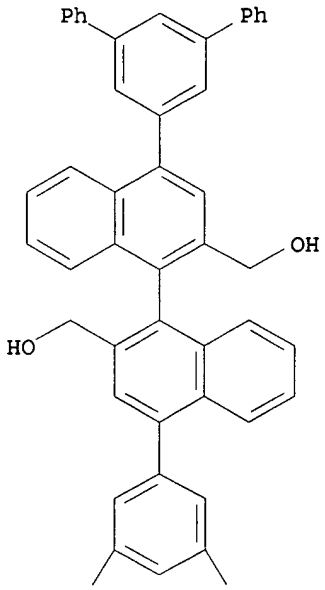



PAGE 2-A




RN 743422-23-3 HCAPLUS
CN [1,1'-Binaphthalene]-2,2'-dimethanol, 4,4'-bis([1,1':3',1''-terphenyl]-5'-yl)-, (1S)- (9CI) (CA INDEX NAME)

PAGE 1-A




PAGE 2-A


IC ICM C07D487-10
ICS C07B053-00; C07C015-58; C07C022-04; C07C033-34; C07C039-225; C07C041-30; C07C043-225; C07C067-36; C07C069-76; C07C249-02; C07C251-24; C07C309-65; C07M007-00
CC 27-20 (Heterocyclic Compounds (One Hetero Atom))
Section cross-reference(s): 34
IT 583050-12-8P **583050-13-9P 583050-14-0P**
**583050-16-2P 583050-17-3P** 583050-18-4P
583050-19-5P **583050-20-8P 583050-21-9P**
596107-95-8P **596107-96-9P 596107-97-0P**
**596107-98-1P 727713-01-1P 743422-07-3P**
**743422-10-8P** 743422-12-0P 743422-15-3P
**743422-21-1P 743422-23-3P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation of optically active spirobi[binaphthyldimethylammonium] derivs. as phase-transfer catalysts for preparation of optically active amino acids)

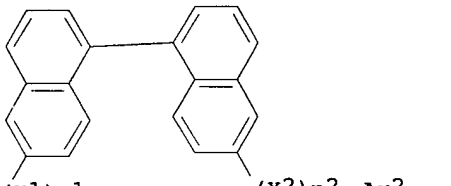
L54 ANSWER 13 OF 51 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2004:633116 HCAPLUS
DOCUMENT NUMBER: 141:181650
TITLE: Binaphthol based chromophores for the fabrication of blue organic **light emitting** diodes
INVENTOR(S): Bazan, Guillermo C.; Benmansour, Hadjar; Sato, Yoshiharu; Shioya, Takeshi
PATENT ASSIGNEE(S): USA
SOURCE: U.S. Pat. Appl. Publ., 23 pp., Cont.-in-part of U.S. Pat. Appl. 2004 142,206.
CODEN: USXXCO

DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| US 2004151945 | A1 | 20040805 | US 2004-759505 | 2004 0116 |
| US 2004142206 | A1 | 20040722 | US 2003-346667 | 2003 0117 |

PRIORITY APPLN. INFO.: US 2003-346667 A2 2003 0117

OTHER SOURCE(S): MARPAT 141:181650
GI

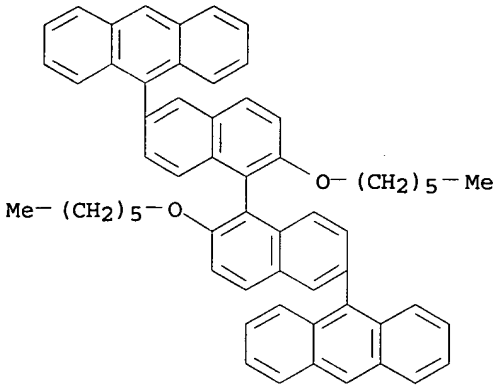


$Ar^1-(X^1)n^1$ $(X^2)n^2-Ar^2$ I

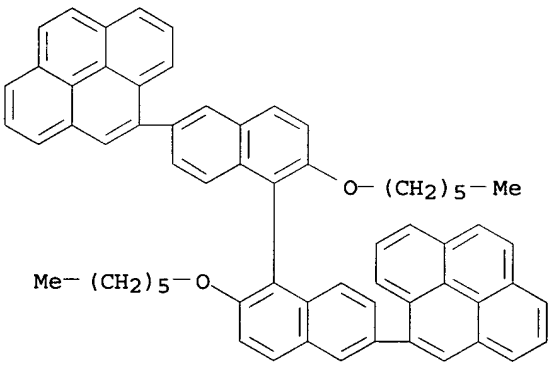
AB Binaphthol derivs. are described by the general formula I (Ar1 and Ar2 = independently selected (un)substituted aromatic hydrocarbon or (un)substituted aromatic heterocycle; each X1 and X2 = independently selected (un)substituted aromatic hydrocarbon; each n1 and n2 = independently 0 or 1; and the compound's binaphthyl framework can be independently substituted at any position except those occupied by (X1)n1Ar1 and (X2)n2Ar2). Fluorescent dyes are described which comprise the derivs. Organic **light-emitting** devices comprising an **anode**, a **cathode** and an emissive layer between the **anode** and **cathode** are also described which are provided with a layer comprising I.

IT **688810-46-0P 724794-01-8P**
RL: DEV (Device component use); MOA (Modifier or additive use); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)
(binaphthol-based chromophores and organic **light-emitting** diodes using them)

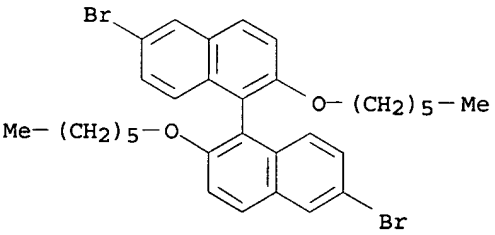
RN 688810-46-0 HCAPLUS
CN Anthracene, 9,9'-[2,2'-bis(hexyloxy)[1,1'-binaphthalene]-6,6'-diyl]bis- (9CI) (CA INDEX NAME)



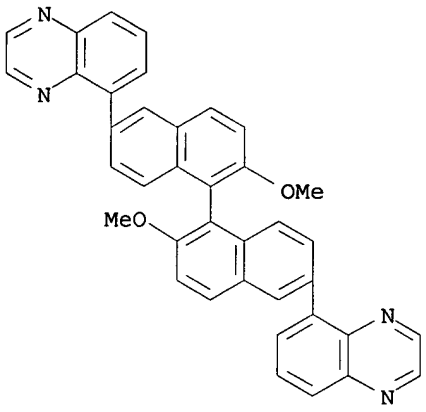

RN 724794-01-8 HCAPLUS
CN Pyrene, 4,4'-[2,2'-bis(hexyloxy)[1,1'-binaphthalene]-6,6'-diyl]bis- (9CI) (CA INDEX NAME)




IT **191787-87-8**
RL: RCT (Reactant); RACT (Reactant or reagent)
(binaphthol-based chromophores and organic **light-emitting** diodes using them)
RN 191787-87-8 HCAPLUS
CN 1,1'-Binaphthalene, 6,6'-dibromo-2,2'-bis(hexyloxy)- (9CI) (CA INDEX NAME)




IT **732292-72-7**
RL: DEV (Device component use); USES (Uses)
(hole-blocking layer; binaphthol-based chromophores and organic **light-emitting** diodes using them)
RN 732292-72-7 HCAPLUS
CN Quinoxaline, 5,5'-(2,2'-dimethoxy[1,1'-binaphthalene]-6,6'-diyl)bis- (9CI) (CA INDEX NAME)




IC ICM B32B009-00
INCL 428690000
CC 73-11 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)
Section cross-reference(s): 25, 41, 76
ST binaphthol deriv chromophore org **light emitting** device; fluorescent dye binaphthol deriv
IT Fluorescent dyes
(binaphthol-based chromophores and organic **light-emitting** diodes using them)
IT **Electroluminescent** devices
(blue-emitting; binaphthol-based chromophores and organic **light-emitting** diodes using them)
IT Phosphorescent substances
(dye dopant; binaphthol-based chromophores and organic **light-emitting** diodes using them)
IT **Electroluminescent** devices
(organic; binaphthol-based chromophores and organic **light-emitting** diodes using them)
IT 58328-31-7, CBP 123847-85-8, α-NPD 182507-83-1
RL: DEV (Device component use); USES (Uses)
(binaphthol-based chromophores and organic **light-emitting** diodes using them)
IT **688810-46-0P 724794-01-8P**
RL: DEV (Device component use); MOA (Modifier or additive use); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)
(binaphthol-based chromophores and organic **light-emitting** diodes using them)
IT 100622-34-2, 9-Anthracene boronic acid **191787-87-8** 496839-55-5
RL: RCT (Reactant); RACT (Reactant or reagent)
(binaphthol-based chromophores and organic **light-emitting** diodes using them)
IT **732292-72-7**
RL: DEV (Device component use); USES (Uses)
(hole-blocking layer; binaphthol-based chromophores and organic **light-emitting** diodes using them)
IT 94928-86-6, fac-Tris(2-phenylpyridine) iridium
RL: DEV (Device component use); MOA (Modifier or additive use); USES (Uses)
(phosphorescent dye dopant; binaphthol-based chromophores and organic **light-emitting** diodes using them)

L54 ANSWER 14 OF 51 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2004:589086 HCAPLUS
DOCUMENT NUMBER: 141:147847

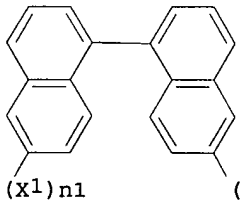
TITLE: Binaphthol-based chromophores for the fabrication of blue organic **light-emitting** diodes
INVENTOR(S): Bazan, Guillermo C.; Benmansour, Hadjar
PATENT ASSIGNEE(S): USA
SOURCE: U.S. Pat. Appl. Publ., 22 pp.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| US 2004142206 | A1 | 20040722 | US 2003-346667 | 2003 0117 |
| US 2004151945 | A1 | 20040805 | US 2004-759505 | 2004 0116 |
| WO 2004067675 | A2 | 20040812 | WO 2004-US1101 | 2004 0116 |
| WO 2004067675 | A3 | 20041111 | | |

W: AE, AE, AG, AL, AL, AM, AM, AM, AT, AT, AU, AZ, AZ, BA, BB, BG, BG, BR, BR, BW, BY, BY, BZ, BZ, CA, CH, CN, CN, CO, CO, CR, CR, CU, CU, CZ, CZ, DE, DE, DK, DK, DM, DZ, EC, EC, EE, EE, EG, ES, ES, FI, FI, GB, GD, GE, GE, GH, GM, HR, HR, HU, HU, ID, IL, IN, IS, JP, JP, KE, KE, KG, KG, KP, KP, KP, KR, KR, KZ, KZ, KZ, LC, LK, LR, LS, LS, LT, LU, LV, MA, MD, MD, MG, MK, MN, MW, MX, MX, MZ, MZ, NA, NI

PRIORITY APPLN. INFO.: US 2003-346667 A2 2003 0117

OTHER SOURCE(S): MARPAT 141:147847
GI



$Ar^1-(X^1)n1$ $(X^2)n2-Ar^2$ I

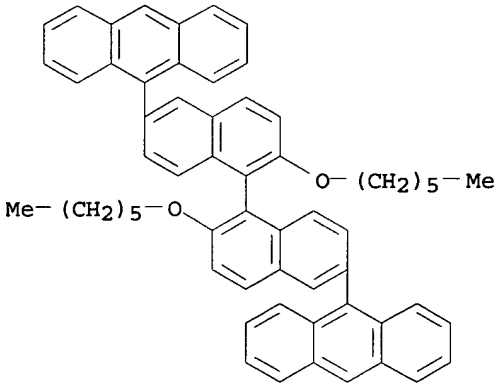
AB Binaphthol derivs. are described by the general formula I (Ar1 and Ar2 = independently selected (un)substituted aromatic hydrocarbon or (un)substituted aromatic heterocycle; each X1 and X2 = independently selected (un)substituted aromatic hydrocarbon; each n1 and n2 = independently 0 or 1; and the compound's binaphthyl framework can be independently substituted at any position except those occupied by (X1)n1Ar1 and (X2)n2Ar2). Fluorescent dyes are described which comprise the derivs. Organic **light-emitting** devices comprising an **anode**, a **cathode** and an emissive layer between the **anode** and **cathode** are also described which are provided with a layer comprising I.

IT **688810-46-0P 724794-01-8P**
RL: DEV (Device component use); MOA (Modifier or additive use); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)

(binaphthol-based chromophores and organic **light-emitting** diodes using them)

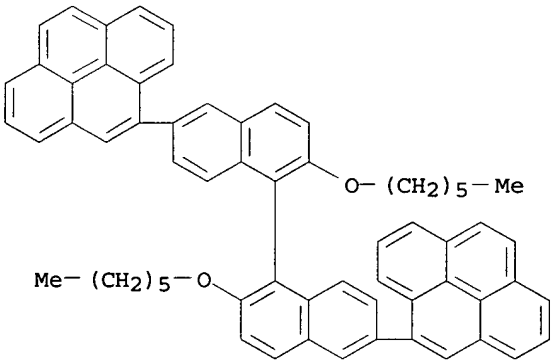
RN 688810-46-0 HCAPLUS

CN Anthracene, 9,9'-[2,2'-bis(hexyloxy)[1,1'-binaphthalene]-6,6'-diyl]bis- (9CI) (CA INDEX NAME)




RN 724794-01-8 HCAPLUS

CN Pyrene, 4,4'-[2,2'-bis(hexyloxy)[1,1'-binaphthalene]-6,6'-diyl]bis- (9CI) (CA INDEX NAME)



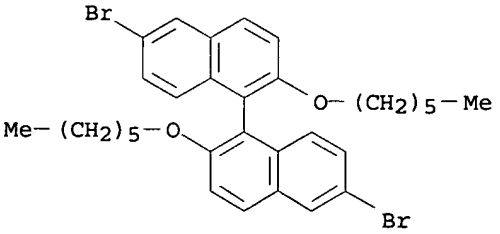

IT **191787-87-8**

RL: RCT (Reactant); RACT (Reactant or reagent)

(binaphthol-based chromophores and organic **light-emitting** diodes using them)

RN 191787-87-8 HCAPLUS

CN 1,1'-Binaphthalene, 6,6'-dibromo-2,2'-bis(hexyloxy)- (9CI) (CA INDEX NAME)




IC ICM H05B033-14

INCL 428690000; 428917000; 313504000
CC 73-11 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)
Section cross-reference(s): 25, 41, 76
ST binaphthol deriv chromophore org **light emitting** device; fluorescent dye binaphthol deriv
IT Fluorescent dyes
(binaphthol-based chromophores and organic **light-emitting** diodes using them)
IT **Electroluminescent** devices
(organic; binaphthol-based chromophores and organic **light-emitting** diodes using them)
IT 58328-31-7, CBP
RL: DEV (Device component use); USES (Uses)
(binaphthol-based chromophores and organic **light-emitting** diodes using them)
IT **688810-46-0P 724794-01-8P**
RL: DEV (Device component use); MOA (Modifier or additive use); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)
(binaphthol-based chromophores and organic **light-emitting** diodes using them)
IT 100622-34-2, 9-Anthracene boronic acid **191787-87-8** 496839-55-5
RL: RCT (Reactant); RACT (Reactant or reagent)
(binaphthol-based chromophores and organic **light-emitting** diodes using them)

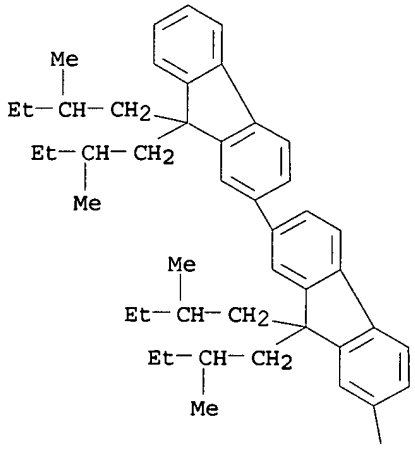
L54 ANSWER 15 OF 51 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2004:468734 HCAPLUS
DOCUMENT NUMBER: 141:181568
TITLE: Organic polarized **light-emitting** diodes via Foerster energy transfer using monodisperse conjugated oligomers
AUTHOR(S): Chen, Andrew C. A.; Culligan, Sean W.; Geng, Yanhou; Chen, Shaw H.; Klubek, Kevin P.; Vaeth, Kathleen M.; Tang, Ching W.
CORPORATE SOURCE: Department of Chemical Engineering and Laboratory for Laser Energetics, Center for Optoelectronics and Imaging, University of Rochester, Rochester, NY, 14623-1212, USA
SOURCE: Advanced Materials (Weinheim, Germany) (2004), 16(9-10), 783-788
CODEN: ADVMEW; ISSN: 0935-9648
PUBLISHER: Wiley-VCH Verlag GmbH & Co. KGaA
DOCUMENT TYPE: Journal
LANGUAGE: English

(May 2004)

AB Polarized **OLEDs** were constructed using fluorene derivative lightly doped with monodisperse conjugated oligomers for an efficient emission of green, red, and white light. This is the first demonstration of polarized **OLEDs** which operate by way of the intermol. Forster energy transfer as a novel approach to efficient and highly polarized full color and white light **OLEDs** with a polarization ratio of up to 25, a luminance yield of up to 6.4 cd A-1, a turn-on voltage of < 4 V, and a voltage-independent chromaticity.
IT **733805-02-2**
RL: DEV (Device component use); MOA (Modifier or additive use); PEP (Physical, engineering or chemical process); PRP (Properties); PYP (Physical process); PROC (Process); USES (Uses)
(organic polarized **light-emitting** diodes via Foerster energy transfer based on fluorene derivative lightly doped with monodisperse conjugated oligomers)
RN 733805-02-2 HCAPLUS
CN 2,2':7',2''-Ter-9H-fluorene, 7,7'''-[1,1'-binaphthalene]-4,4'-diylbis[9,9,9',9',9'',9''-hexakis(2-methylbutyl)- (9CI) (CA INDEX

NAME)

PAGE 1-A

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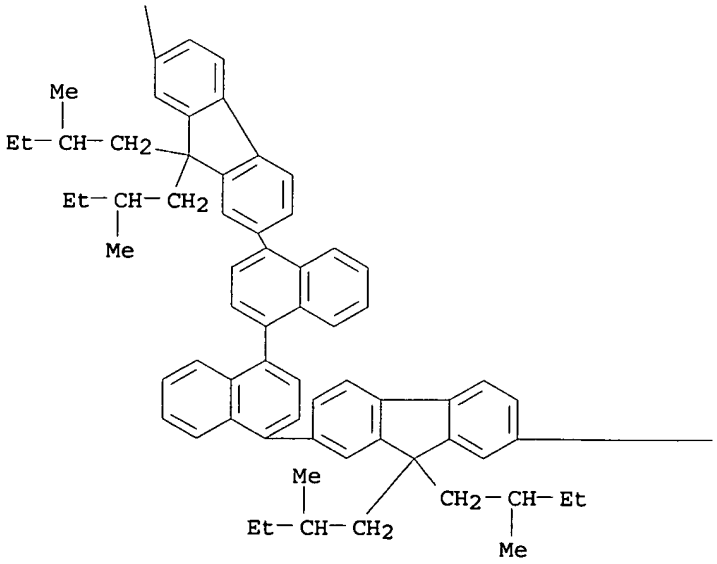

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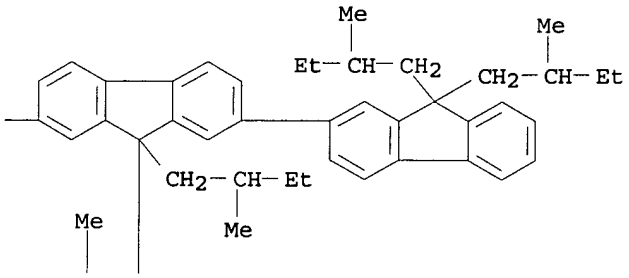


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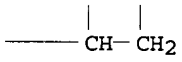
PAGE 3-B




CC 73-11 (**Optical**, Electron, and Mass Spectroscopy and Other Related Properties)
Section cross-reference(s): 35, 75, 76

ST polarized **electroluminescent** device energy transfer monodisperse conjugated oligomer dopant; **OLED** polarized fluorene doping oligomer **electroluminescence** Forster energy transfer

IT Doping
(effect of doping concentration; organic polarized **light-emitting** diodes via Foerster energy transfer based on fluorene derivative lightly doped with monodisperse conjugated oligomers)

IT Oligomers
RL: DEV (Device component use); PRP (Properties); USES (Uses)
(monodisperse conjugated; organic polarized **light-emitting** diodes via Foerster energy transfer based on fluorene derivative lightly doped with monodisperse conjugated oligomers)

IT Liquid crystals
(nematic; organic polarized **light-emitting** diodes via Foerster energy transfer based on fluorene derivative lightly doped with monodisperse conjugated oligomers)

IT Fluorescence
Refractive index
(of fluorene derivative for use in organic polarized **light-**

**emitting** diodes)
IT **Electroluminescent** devices
Energy transfer
(organic polarized **light-emitting** diodes via Foerster energy transfer using monodisperse conjugated oligomers)
IT **Luminescence, electroluminescence**
(polarized; **organic** polarized **light-emitting** diodes via Foerster energy transfer using monodisperse conjugated oligomers)
IT 630425-86-4 733805-01-1 **733805-02-2** 733805-03-3
RL: DEV (Device component use); MOA (Modifier or additive use); PEP (Physical, engineering or chemical process); PRP (Properties); PYP (Physical process); PROC (Process); USES (Uses)
(organic polarized **light-emitting** diodes via Foerster energy transfer based on fluorene derivative lightly doped with monodisperse conjugated oligomers)
IT 491880-92-3
RL: DEV (Device component use); PEP (Physical, engineering or chemical process); PRP (Properties); PYP (Physical process); PROC (Process); USES (Uses)
(organic polarized **light-emitting** diodes via Foerster energy transfer based on fluorene derivative lightly doped with monodisperse conjugated oligomers)
REFERENCE COUNT: 84 THERE ARE 84 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L54 ANSWER 16 OF 51 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2004:451121 HCAPLUS
DOCUMENT NUMBER: 141:14264
TITLE: Organic **electroluminescent** devices with good heat resistance, long service life, and high luminance at low drive voltage
INVENTOR(S): Soma, Minoru; Iida, Koichiro; Ogata, Tomoyuki; Sato, Yoshiharu
PATENT ASSIGNEE(S): Mitsubishi Chemical Corp., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 47 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| JP 2004158216 | A2 | 20040603 | JP 2002-320194 | 2002 1101 |
| PRIORITY APPLN. INFO.: | | | JP 2002-320194 | 2002 1101 |

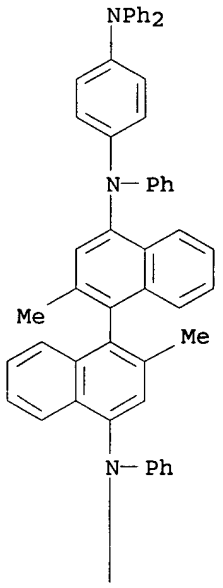
OTHER SOURCE(S): MARPAT 141:14264
AB The devices have, between emitting layers and **anodes**, wet-formed layers containing hole-transporting substances (e.g., aromatic amines, phthalocyanines, porphyrins) of mol. weight <2000 and electron acceptors represented by Ar1Ar2Ar3B (Ar1-Ar3 = aromatic hydrocarbyl, aromatic heterocycle).
IT **640772-70-9**
RL: DEV (Device component use); PEP (Physical, engineering or chemical process); PYP (Physical process); PROC (Process); USES (Uses)
(hole-injecting layers; long-life organic **LED** containing low-mol.-weight aromatic amines and arylboranes in hole-injecting

layers)

RN 640772-70-9 HCAPLUS

CN [1,1'-Binaphthalene]-4,4'-diamine, N,N'-bis[4-(diphenylamino)phenyl]-2,2'-dimethyl-N,N'-diphenyl- (9CI) (CA INDEX NAME)

PAGE 1-A

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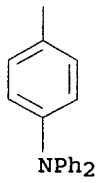



IC ICM H05B033-22
ICS C09K011-06; H05B033-14

CC 73-11 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)

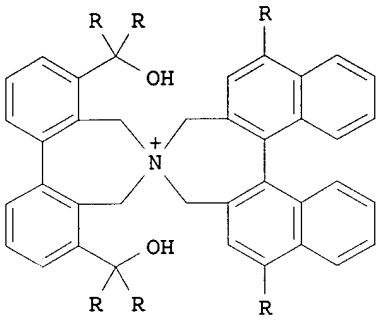
ST **electroluminescent** device arylborane electron acceptor heat resistance; perfluorotriphenylborane binaphthylamine hole injecting layer LED

IT **Electroluminescent** devices
(org; long-life organic **LED** containing low-mol.-weight aromatic amines and arylboranes in hole-injecting layers)

IT 1109-15-5 **640772-70-9**
RL: DEV (Device component use); PEP (Physical, engineering or chemical process); PYP (Physical process); PROC (Process); USES (Uses)
(hole-injecting layers; long-life organic **LED** containing low-mol.-weight aromatic amines and arylboranes in hole-injecting layers)

L54 ANSWER 17 OF 51 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2004:400619 HCAPLUS

DOCUMENT NUMBER: 141:140245
TITLE: Design of New Chiral Phase-Transfer Catalysts with Dual Functions for Highly Enantioselective Epoxidation of α,β-Unsaturated Ketones
AUTHOR(S): Ooi, Takashi; Ohara, Daisuke; Tamura, Masazumi; Maruoka, Keiji
CORPORATE SOURCE: Department of Chemistry, Graduate School of Science, Kyoto University, Kyoto, 606-8502, Japan
SOURCE: Journal of the American Chemical Society (2004), 126(22), 6844-6845
CODEN: JACSAT; ISSN: 0002-7863
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 141:140245
GI




I

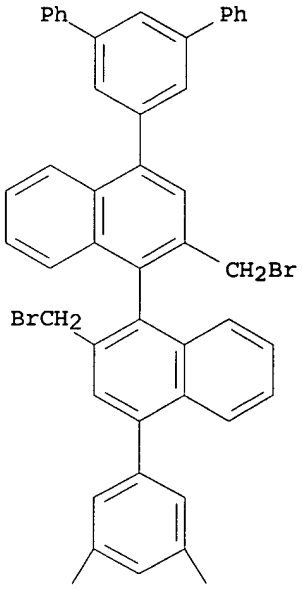
AB A new chiral ammonium bromide I (R = 3,5-Ph2C6H3), possessing diarylmethanol functionality as a substrate recognition site, has been designed as a promising, dual-functioning catalyst for the highly enantioselective epoxidn. of α,β-unsatd. ketones under mild phase-transfer conditions. For instance, vigorous stirring of a mixture of chalcone, I (3 mol %), and 13% NaOCl in toluene at 0° for 24 h gave epoxy chalcone quant. with 96% ee. A variety of α,β-unsatd. ketones can also be epoxidized with rigorous stereochem. control, clearly demonstrating the effectiveness and utility of the present system. Further, a successful single-crystal X-ray diffraction anal. of hexafluorophosphate analog of I uncovered its distinctive three-dimensional mol. architecture and provided useful information for postulating the transition state.

IT **727713-01-1P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation of chiral quaternary ammonium bromides as phase-transfer catalysts for asym. epoxidn. of α,β-unsatd. ketones)

RN 727713-01-1 HCAPLUS

CN 1,1'-Binaphthalene, 2,2'-bis(bromomethyl)-4,4'-bis([1,1':3',1''-terphenyl]-5'-yl)-, (1S)- (9CI) (CA INDEX NAME)

PAGE 1-A

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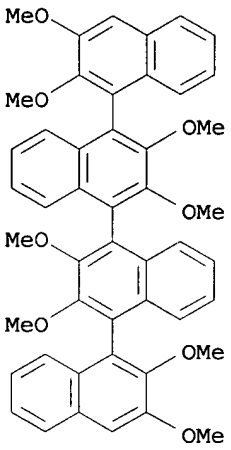
CC 27-2 (Heterocyclic Compounds (One Hetero Atom))
Section cross-reference(s): 75
IT **727713-01-1P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation of chiral quaternary ammonium bromides as phase-transfer catalysts for asym. epoxidn. of α,β-unsatd. ketones)
REFERENCE COUNT: 21 THERE ARE 21 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L54 ANSWER 18 OF 51 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2004:347672 HCAPLUS
DOCUMENT NUMBER: 141:123459
TITLE: Configurationally defined sexi- and octinaphthalene derivatives: synthesis and optical properties
AUTHOR(S): Furuta, Takumi; Tanaka, Kiyoshi; Tsubaki, Kazunori; Fuji, Kaoru
CORPORATE SOURCE: School of Pharmaceutical Sciences, University of Shizuoka, Shizuoka, 422-8526, Japan
SOURCE: Tetrahedron (2004), 60(20), 4431-4441
CODEN: TETRAB; ISSN: 0040-4020
PUBLISHER: Elsevier Science B.V.
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 141:123459
AB The copper mediated oxidative coupling of optically active quaternaphthalenes having a 2-hydroxynaphthyl moiety gave configurationally defined optically active octinaphthalenes. The

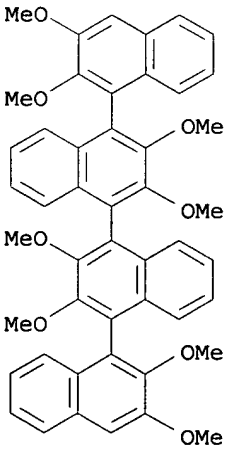
absolute configuration was determined by comparison with products of [6+2] coupling. The CD spectra of bi-, ter-, quater-, sexi- and octinaphthalenes suggested that the absolute configuration of the chiral axis could be deduced from the intensity of their Cotton effects.

IT **183015-40-9 183182-75-4**
RL: PRP (Properties)
(preparation and optical properties of configurationally defined sexi- and octinaphthalenes)

RN 183015-40-9 HCAPLUS
CN 1,1':4',1'':4'',1'''-Quaternaphthalene, 2,2',2'',2''',3,3',3'',3'''-octamethoxy-, stereoisomer (9CI) (CA INDEX NAME)




RN 183182-75-4 HCAPLUS
CN 1,1':4',1'':4'',1'''-Quaternaphthalene, 2,2',2'',2''',3,3',3'',3'''-octamethoxy-, stereoisomer (9CI) (CA INDEX NAME)




IT **328235-19-4P 328235-27-4P 328379-65-3P 328379-71-1P**
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(preparation and optical properties of configurationally defined

sexi- and octinaphthalenes)

RN 328235-19-4 HCAPLUS

CN 1,1':4',1'':4'',1''':4''',1'''':4'''',1''''':4''''',1'''''-Sexinaphthalene, 2,2',2'',2''',2'''',2''''',3,3',3'',3''',3'''',3''''',3'''''-dodecamethoxy-, (1S,1''S,1'''S,1''''S,1'''''S)- (9CI) (CA INDEX NAME)

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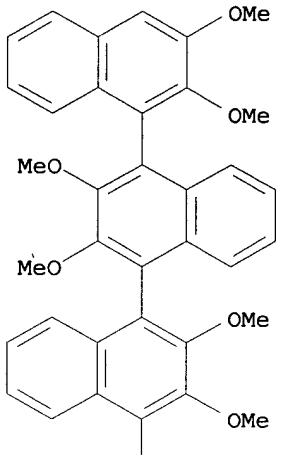


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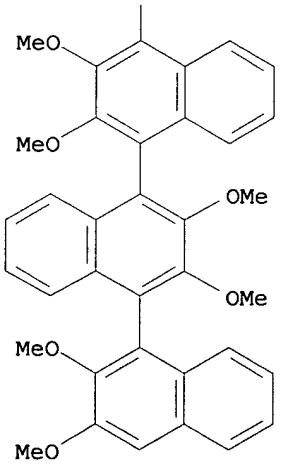


RN 328235-27-4 HCAPLUS

CN 1,1':4',1'':4'',1''':4''',1'''':4'''',1''''':4''''',1'''''':4''''''',1'''''''-Octinaphthalene, 2,2',2'',2''',2'''',2''''',2'''''',2''''''',3,3',3'',3''',3'''',3''''',3'''''',3''''''',3'''''''-hexadecamethoxy-, (1S,1''S,1'''S,1''''S,1'''''S,1''''''S,1'''''''S)- (9CI) (CA INDEX NAME)

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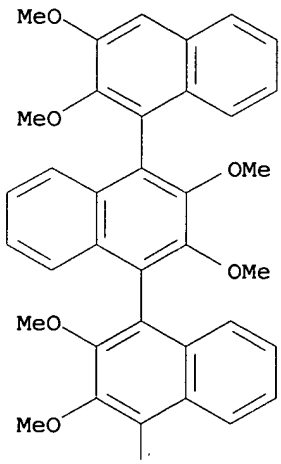


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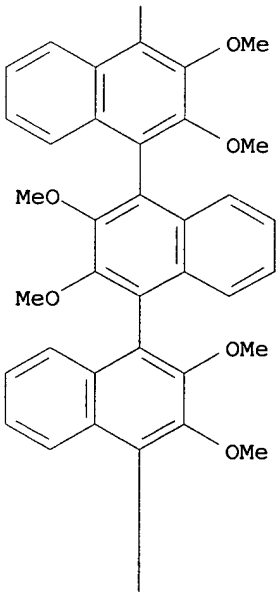

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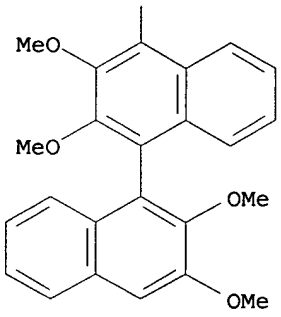
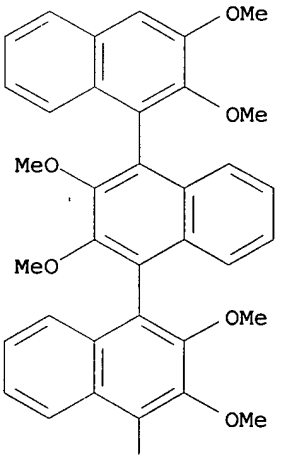



RN 328379-65-3 HCAPLUS
CN 1,1':4',1'':4'',1''':4''',1'''':4'''',1'''''-Sexinaphthalene, 2,2',2'',2''',2'''',2''''',3,3',3'',3''',3'''',3'''''-dodecamethoxy-, (1S,1''S,1'''R,1''''S,1'''''S)- (9CI) (CA INDEX NAME)

PAGE 1-A



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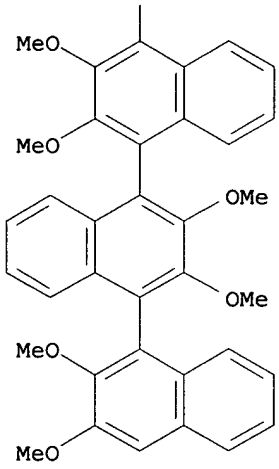
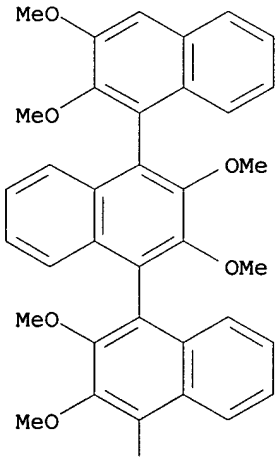
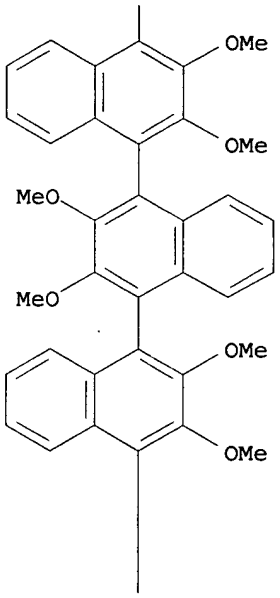



RN 328379-71-1 HCAPLUS
CN 1,1':4',1'':4'',1''':4''',1'''':4'''',1''''':4''''',1'''''':4''''''
',1'''''''-Octinaphthalene, 2,2',2'',2''',2'''',2''''',2'''''',2''
''''',3,3',3'',3''',3'''',3''''',3'''''',3'''''''-hexadecamethoxy-
, (1S,1''S,1'''S,1''''R,1'''''S,1''''''S,1'''''''S)- (9CI) (CA
INDEX NAME)

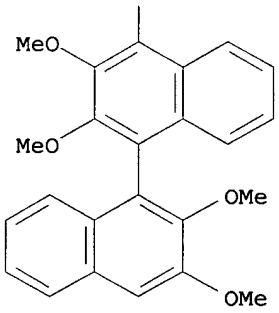
PAGE 1-A



PAGE 2-A




PAGE 3-A

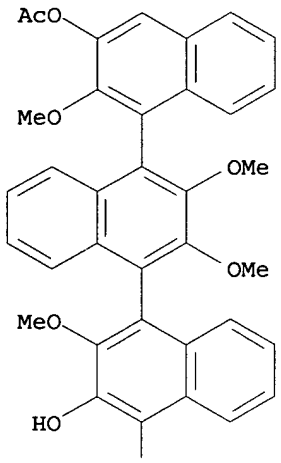



IT **328235-16-1P 328235-17-2P 328235-18-3P**
**328235-20-7P 328235-21-8P 328235-23-0P**
**328235-24-1P 328235-25-2P 328235-26-3P**
**328235-28-5P 328235-29-6P 328379-62-0P**
**328379-63-1P 328379-64-2P 328379-66-4P**
**328379-68-6P 328379-69-7P 328379-70-0P**
**328379-72-2P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and optical properties of configurationally defined sexi- and octinaphthalenes)

RN 328235-16-1 HCAPLUS

CN [1,1':4',1'':4'',1''':4''',1'''':4'''',1'''''-Sexinaphthalene]-2''',3,3'',3''''-tetrol, 2,2',2'',2'''',2''''',3',3''',3''''-octamethoxy-, 3,3''''''-diacetate, (1S,1''S,1'''S,1''''S,1'''''S)-(9CI) (CA INDEX NAME)

PAGE 1-A

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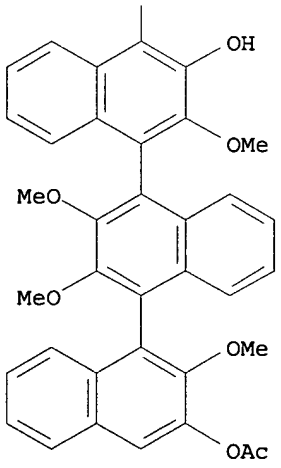


RN 328235-17-2 HCAPLUS
CN [1,1':4',1'':4'',1''':4''',1'''':4'''',1''''':4''''',1'''''-Sexinaphthalene]-3,3'''''-diol, 2,2',2'',2''',2'''',2''''',3',3'',3''',3''''-decamethoxy-, diacetate, (1S,1''S,1'''S,1''''S,1'''''S)- (9CI) (CA INDEX NAME)

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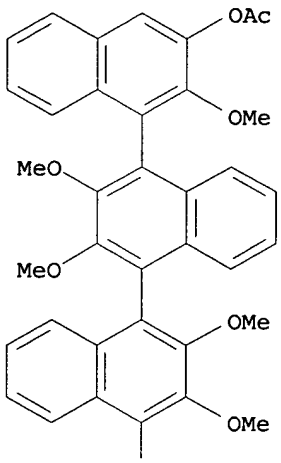


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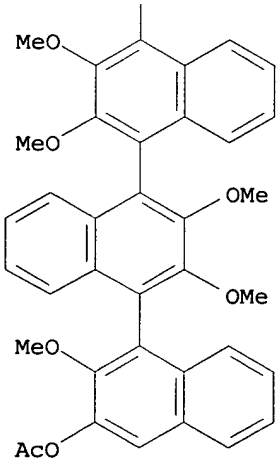


RN 328235-18-3 HCAPLUS
CN [1,1':4',1'':4'',1''':4''',1'''':4'''',1''''':4''''',1'''''-Sexinaphthalene]-3,3'''''-diol, 2,2',2'',2''',2'''',2''''',3',3'',3''',3''''-decamethoxy-, (1S,1''S,1'''S,1''''S,1'''''S)- (9CI) (CA INDEX NAME)

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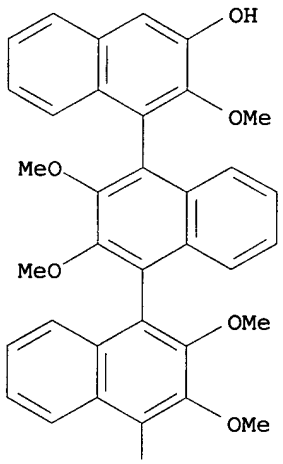


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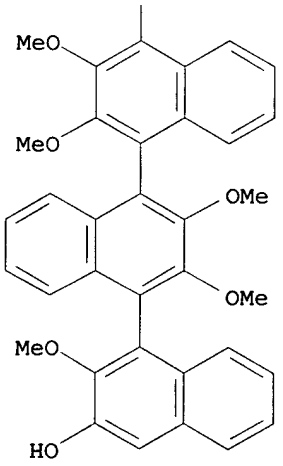


RN 328235-20-7 HCAPLUS
CN [1,1':4',1'':4'',1'''-Quaternaphthalene]-3,3'''-diol, 2,2',2'',2''',3',3''-hexamethoxy-, diacetate, (1S,1''S,1'''S)-(9CI) (CA INDEX NAME)

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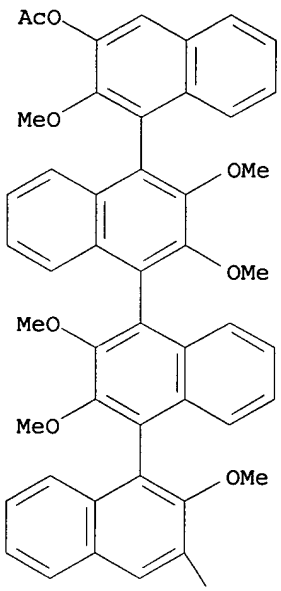


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RN 328235-21-8 HCAPLUS
CN [1,1':4',1'':4'',1'''-Quaternaphthalene]-3,3'''-diol, 2,2',2'',2''',3',3''-hexamethoxy-, monoacetate, (1S,1''S,1'''S)-(9CI) (CA INDEX NAME)

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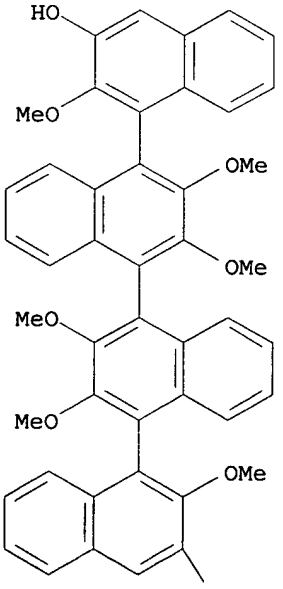

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RN 328235-23-0 HCAPLUS
CN [1,1':4',1'':4'',1''':4''',1'''':4'''',1''''':4''''',1'''''-Sexinaphthalene]-2'',3,3',3'''''-tetrol, 2,2',2''',2'''',2''''',3'',3''',3''''-octamethoxy-, 3,3'''''-diacetate, (1S,1''S,1'''S,1''''S,1'''''S)-(9CI) (CA INDEX NAME)

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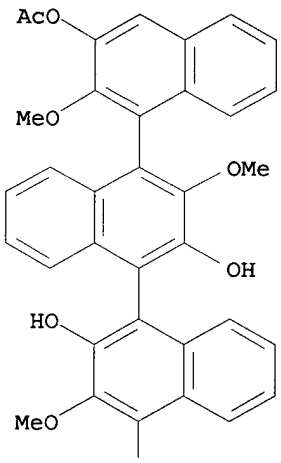


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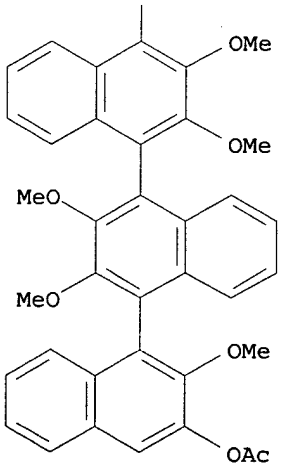

RN 328235-24-1 HCAPLUS
CN [1,1':4',1'':4'',1''':4''',1'''':4'''',1''''':4''''',1'''''':4''''''-Octinaphthalene]-2'''',3,3''',3'''''''-tetrol, 2,2',2'',2''',2''''',2'''''',2'''''''',3',3'',3'''',3''''',3''''''-dodecamethoxy-, 3,3'''''''-diacetate, (1S,1''S,1'''S,1''''S,1'''''S,1''''''S,1'''''''S)- (9CI) (CA INDEX NAME)

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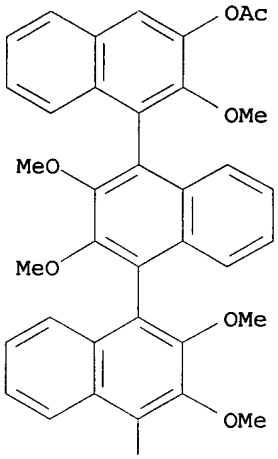


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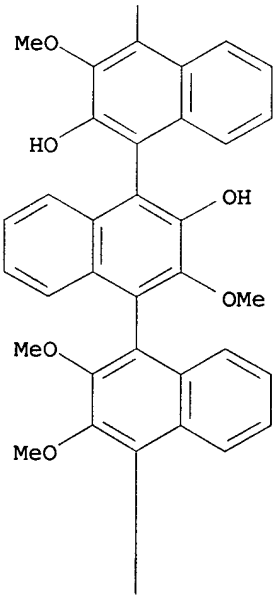

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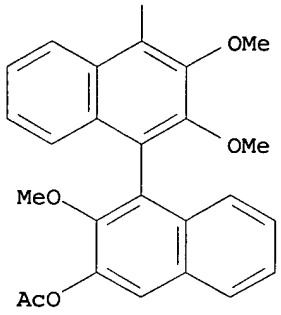


RN 328235-25-2 HCAPLUS
CN [1,1':4',1'':4'',1''':4''',1'''':4'''',1''''':4''''',1'''''':4''''''',1'''''''-Octinaphthalene]-3,3'''''''-diol, 2,2',2'',2''',2'''',2''''',2'''''',2''''''',3',3'',3''',3'''',3''''',3'''''',3''''''-tetradecamethoxy-, diacetate, (1S,1''S,1'''S,1''''S,1'''''S,1''''''S,1'''''''S)- (9CI) (CA INDEX NAME)

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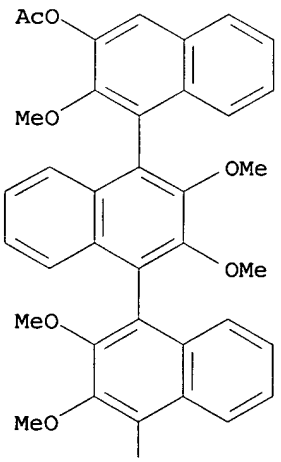

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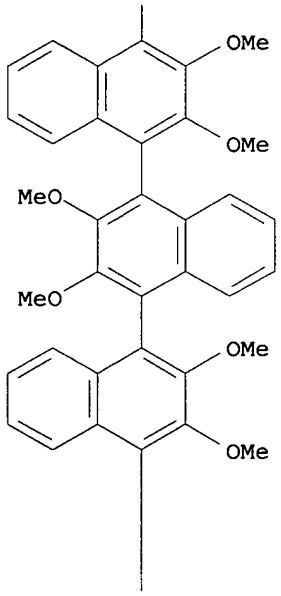


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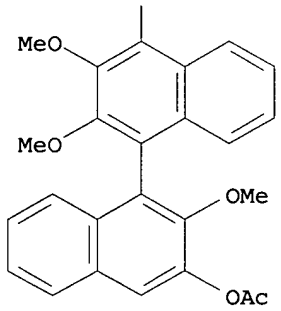


RN 328235-26-3 HCAPLUS
CN [1,1':4',1'':4'',1''':4''',1'''':4'''',1''''':4''''',1'''''':4''''''-Octinaphthalene]-3,3'''''''-diol, 2,2',2'',2''',2'''',2''''',2'''''',2''''''',3',3'',3''',3'''',3''''',3''''''-tetradecamethoxy-, (1S,1''S,1'''S,1''''S,1'''''S,1''''''S,1'''''''S)- (9CI) (CA INDEX NAME)

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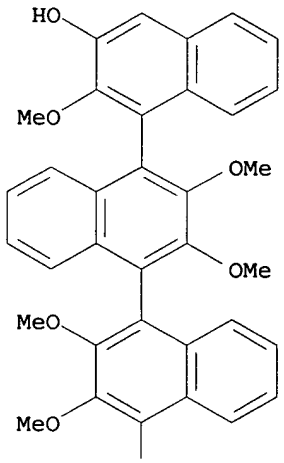


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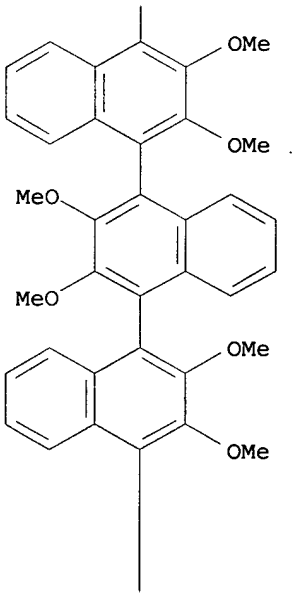

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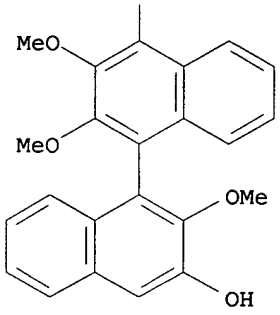


RN 328235-28-5 HCAPLUS
CN [1,1':4',1'':4'',1''':4''',1'''':4'''',1'''''-Sexinaphthalene]-3,3'''''-diol, 2,2',2'',2''',2'''',2''''',3',3'',3''',3''''-decamethoxy-, monoacetate, (1S,1''S,1'''S,1''''S,1'''''S)- (9CI) (CA INDEX NAME)

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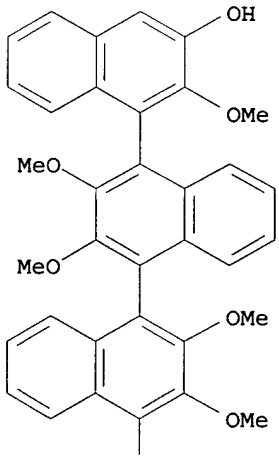

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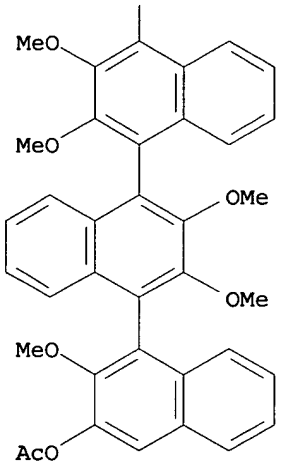


RN 328235-29-6 HCAPLUS
CN [1,1':4',1'':4'',1''':4''',1'''':4'''',1''''':4''''',1'''''':4''''''',1'''''''-Octinaphthalene]-2'',3,3',3'''''''-tetrol, 2,2',2''',2'''',2''''',2'''''',2''''''',3'',3''',3'''',3''''',3''''''-dodecamethoxy-, 3,3'''''''-diacetate, (1S,1''S,1'''S,1''''S,1'''''S,1''''''S,1'''''''S)- (9CI) (CA INDEX NAME)

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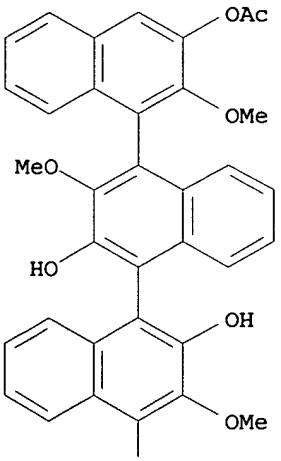

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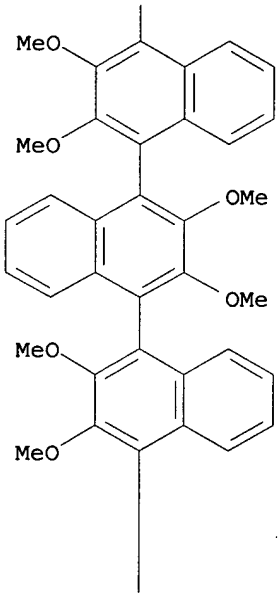


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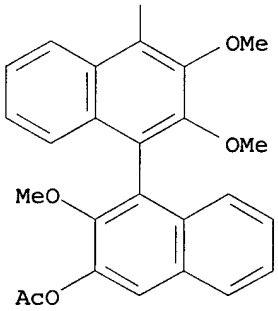


RN 328379-62-0 HCAPLUS
CN [1,1':4',1'':4'',1''':4''',1'''':4'''',1''''':4''''',1'''''-Sexinaphthalene]-2''',3,3'',3''''',3'''''-tetrol, 2,2',2'',2'''',2''''',3',3''',3''''-octamethoxy-, 3,3'''''-diacetate, (1S,1''S,1'''R,1''''S,1'''''S)-(9CI) (CA INDEX NAME)

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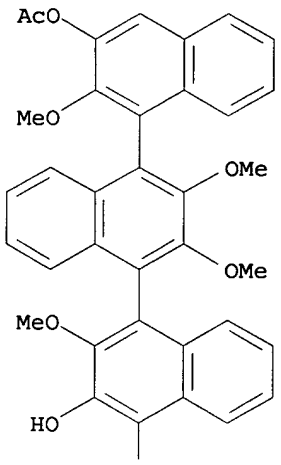


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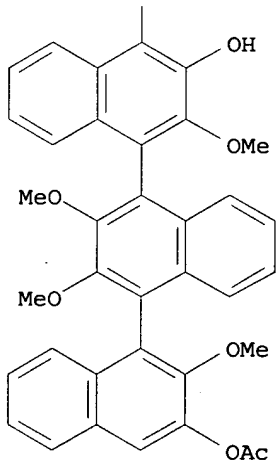


RN 328379-63-1 HCAPLUS
CN [1,1':4',1'':4'',1''':4''',1'''':4'''',1''''':4''''',1'''''-Sexinaphthalene]-3,3'''''-diol, 2,2',2'',2''',2'''',2''''',3',3'',3''',3''''-decamethoxy-, diacetate, (1S,1''S,1'''R,1''''S,1'''''S)- (9CI) (CA INDEX NAME)

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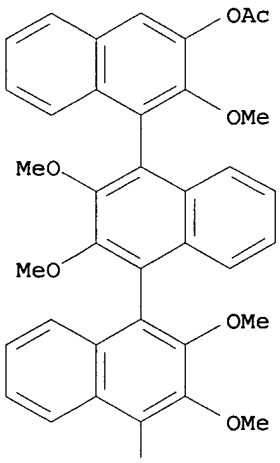


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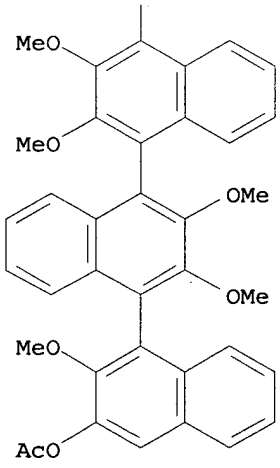


RN 328379-64-2 HCAPLUS
CN [1,1':4',1'':4'',1''':4''',1'''':4'''',1''''':4''''',1'''''-Sexinaphthalene]-3,3'''''-diol, 2,2',2'',2''',2'''',2''''',3',3'',3''',3''''-decamethoxy-, (1S,1''S,1'''R,1''''S,1'''''S)- (9CI) (CA INDEX NAME)

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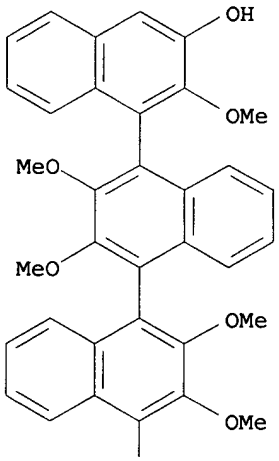


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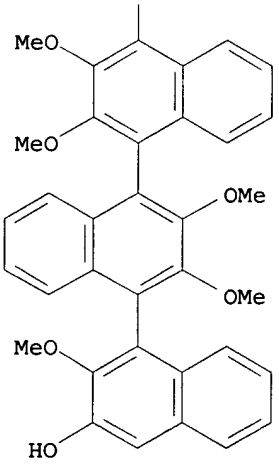


RN 328379-66-4 HCAPLUS
CN [1,1':4',1'':4'',1''':4''',1'''':4'''',1''''':4''''',1'''''-Sexinaphthalene]-2'',3,3',3'''''-tetrol, 2,2',2''',2'''',2''''',3'',3''',3''''-octamethoxy-, 3,3'''''-diacetate, (1S,1''R,1'''S,1''''S,1'''''S)-(9CI) (CA INDEX NAME)

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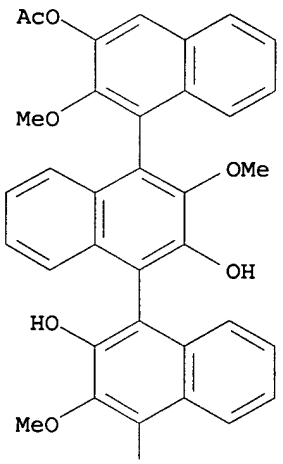


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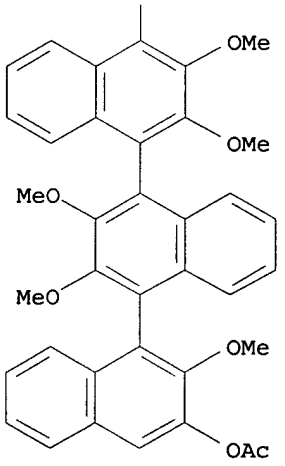


RN 328379-68-6 HCAPLUS
CN [1,1':4',1'':4'',1''':4''',1'''':4'''',1''''':4''''',1'''''':4''''''',1'''''''-Octinaphthalene]-2'''',3,3''',3'''''''-tetrol, 2,2',2'',2''',2''''',2'''''',2''''''',3',3'',3'''',3''''',3'''''''-dodecamethoxy-, 3,3'''''''-diacetate, (1S,1''S,1'''S,1''''R,1'''''S,1''''''S,1'''''''S)- (9CI) (CA INDEX NAME)

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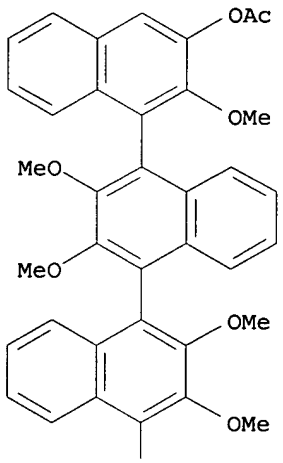


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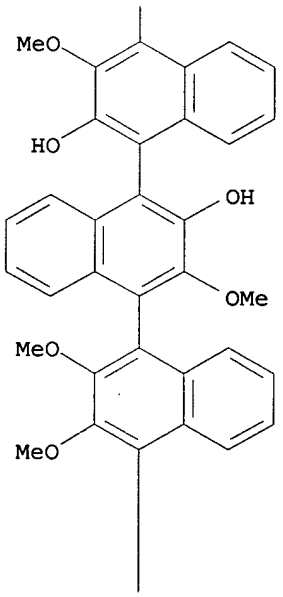

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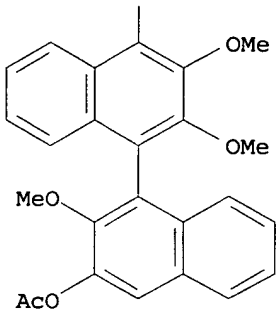


RN 328379-69-7 HCAPLUS
CN [1,1':4',1'':4'',1''':4''',1'''':4'''',1''''':4''''',1'''''':4''''''',1'''''''-Octinaphthalene]-3,3'''''''-diol, 2,2',2'',2''',2'''',2''''',2'''''',2''''''',3',3'',3''',3'''',3''''',3'''''',3''''''-tetradecamethoxy-, diacetate, (1S,1''S,1'''S,1''''R,1'''''S,1''''''S,1'''''''S)- (9CI) (CA INDEX NAME)

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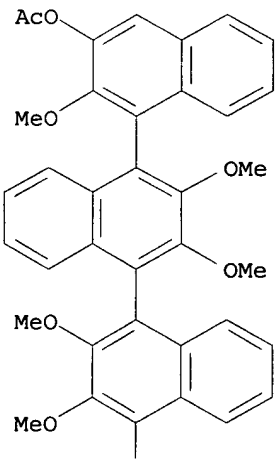

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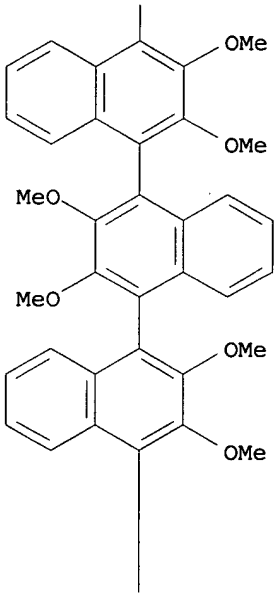


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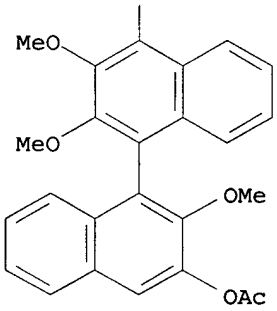


RN 328379-70-0 HCAPLUS
CN [1,1':4',1'':4'',1''':4''',1'''':4'''',1''''':4''''',1'''''':4''''''-Octinaphthalene]-3,3''''''''-diol, 2,2',2'',2''',2'''',2''''',2'''''',2''''''',3',3'',3''',3'''',3''''',3''''''-tetradecamethoxy-, (1S,1''S,1'''S,1''''R,1'''''S,1''''''S,1''''''''S)- (9CI) (CA INDEX NAME)

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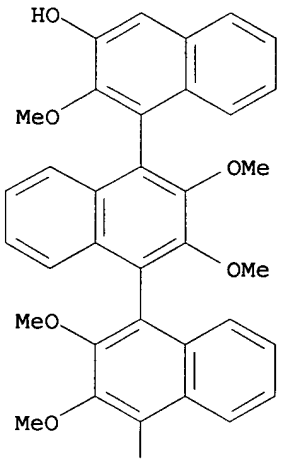
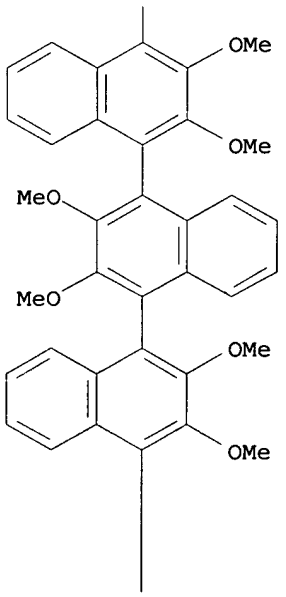
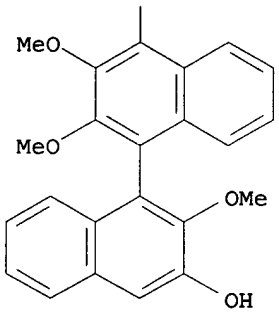



PAGE 2-A

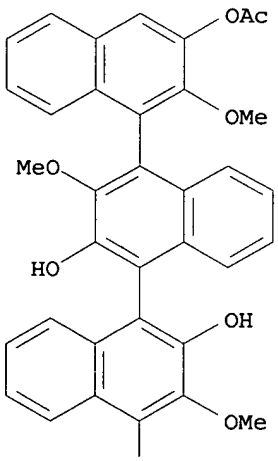


PAGE 3-A

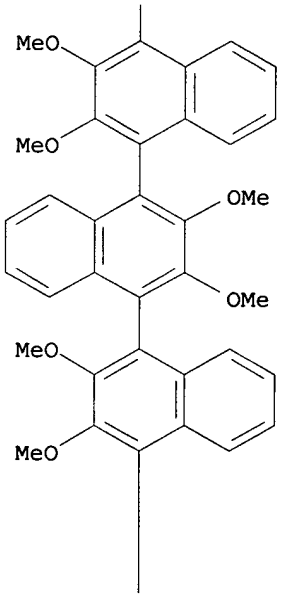



RN 328379-72-2 HCAPLUS
CN [1,1':4',1'':4'',1''':4''',1'''':4'''',1''''':4''''',1'''''':4''''''-Octinaphthalene]-2'',3,3',3''''''-tetrol, 2,2',2''',2'''',2''''',2'''''',2''''''',3'',3''',3'''',3''''',3''''''-dodecamethoxy-, 3,3''''''-diacetate, (1S,1''R,1'''S,1''''S,1'''''S,1''''''S,1''''''S)- (9CI) (CA INDEX NAME)

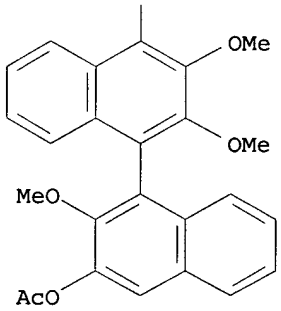
PAGE 1-A



PAGE 2-A




PAGE 3-A

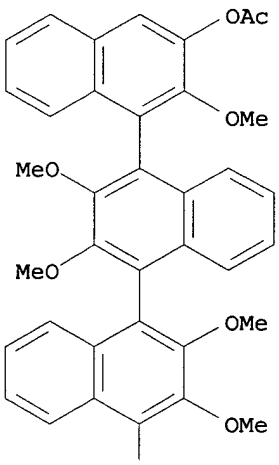



IT **328379-67-5P 721923-84-8P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation and optical properties of configurationally defined sexi- and octinaphthalenes)

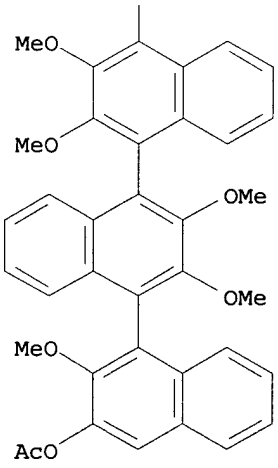
RN 328379-67-5 HCAPLUS

CN [1,1':4',1'':4'',1''':4''',1'''':4'''',1'''''-Sexinaphthalene]-3,3'''''-diol, 2,2',2'',2''',2'''',2''''',3',3'',3''',3''''-decamethoxy-, diacetate, (1S,1''R,1'''S,1''''S,1'''''S)- (9CI) (CA INDEX NAME)

PAGE 1-A

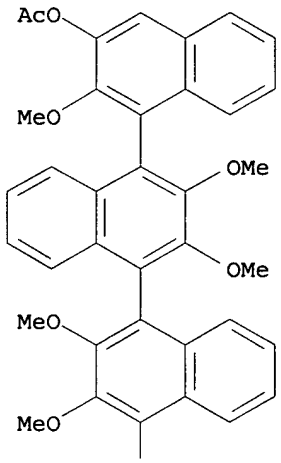



PAGE 2-A

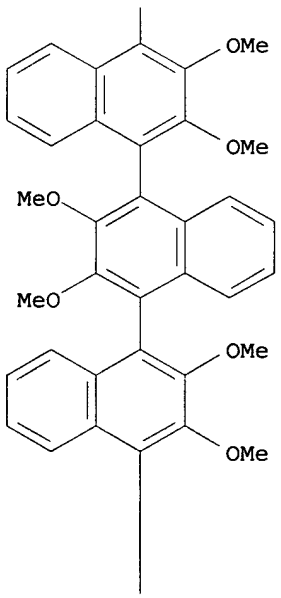



RN 721923-84-8 HCAPLUS
CN [1,1':4',1'':4'',1''':4''',1'''':4'''',1''''':4''''',1'''''':4''''''',1'''''''-Octinaphthalene]-3,3'''''''-diol, 2,2',2'',2''',2'''',2''''',2'''''',2''''''',3',3'',3''',3'''',3''''',3''''''-tetradecamethoxy-, diacetate, (1S,1''R,1'''S,1''''S,1'''''S,1''''''S,1'''''''S)- (9CI) (CA INDEX NAME)

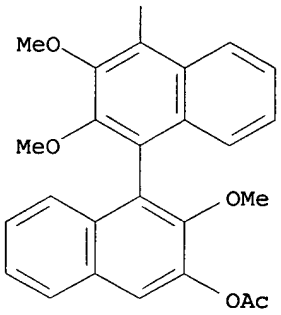
PAGE 1-A




PAGE 2-A



PAGE 3-A




CC 25-24 (Benzene, Its Derivatives, and Condensed Benzenoid Compounds)

IT **183015-40-9** 183015-42-1 **183182-75-4**
RL: PRP (Properties)
(preparation and optical properties of configurationally defined sexi- and octinaphthalenes)

IT **328235-19-4P 328235-27-4P 328379-65-3P**
**328379-71-1P** 721923-85-9P
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(preparation and optical properties of configurationally defined sexi- and octinaphthalenes)

IT 328235-15-0P **328235-16-1P 328235-17-2P**
**328235-18-3P 328235-20-7P 328235-21-8P**
**328235-23-0P 328235-24-1P 328235-25-2P**
**328235-26-3P 328235-28-5P 328235-29-6P**
**328379-62-0P 328379-63-1P 328379-64-2P**
**328379-66-4P 328379-68-6P 328379-69-7P**
**328379-70-0P 328379-72-2P** 721923-83-7P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and optical properties of configurationally defined sexi- and octinaphthalenes)

IT **328379-67-5P 721923-84-8P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation and optical properties of configurationally defined sexi- and octinaphthalenes)

REFERENCE COUNT: 36 THERE ARE 36 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L54 ANSWER 19 OF 51 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2004:272156 HCAPLUS
DOCUMENT NUMBER: 140:312148
TITLE: Organic **electroluminescent** device and **electroluminescent** display
INVENTOR(S): Kita, Hiroshi; Suzurizato, Yoshiyuki; Yamada, Taketoshi; Karatsu, Takashi; Kitamura, Akihide
PATENT ASSIGNEE(S): Konica Minolta Holdings Inc., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 23 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| JP 2004103463 | A2 | 20040402 | JP 2002-265416 | |

PRIORITY APPLN. INFO.: JP 2002-265416 2002 0911

2002 0911

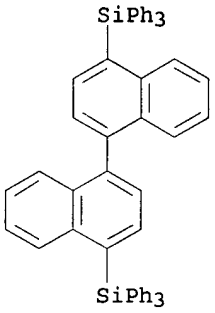
OTHER SOURCE(S): MARPAT 140:312148

AB The title device contains specific triphenylarylsilane in an **electroluminescent** layer. The silane compound is used a host compound or an electron transporting compound The title device shows improved **electroluminescence** and high durability.

IT **676553-38-1**
RL: TEM (Technical or engineered material use); USES (Uses)
(silane compound in organic **electroluminescent** device)

RN 676553-38-1 HCAPLUS

CN Silane, [1,1'-binaphthalene]-4,4'-diylbis[triphenyl- (9CI) (CA INDEX NAME)




IC ICM H05B033-14
ICS C09K011-06; H05B033-22; C07F007-08; C07F007-10

CC 74-13 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
Section cross-reference(s): 29, **73**

ST org **electroluminescent** device display aryl silane

IT Silanes
RL: TEM (Technical or engineered material use); USES (Uses)
(aryl; silane compound in organic **electroluminescent** device)

IT **Electroluminescent** devices
(displays; organic **electroluminescent** device and **electroluminescent** display)

IT **Luminescent** screens
(**electroluminescent**; **organic electroluminescent** device and **electroluminescent** display)

IT **Electroluminescent** devices
(organic **electroluminescent** device and **electroluminescent** display)

IT 676553-36-9 676553-37-0 **676553-38-1** 676553-39-2 676553-40-5 676553-41-6 676553-42-7 676553-43-8 676553-44-9
RL: TEM (Technical or engineered material use); USES (Uses)
(silane compound in organic **electroluminescent** device)

L54 ANSWER 20 OF 51 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2004:250603 HCAPLUS

DOCUMENT NUMBER: 140:279723

TITLE: Organic amine field-effect transistors

INVENTOR(S): Tsurutani, Yasuyuki; Takeuchi, Masako; Ichinosawa, Akiko; Aramaki, Shinji

PATENT ASSIGNEE(S): Mitsubishi Chemical Corp., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 20 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| JP 2004095850 | A2 | 20040325 | JP 2002-254876 | 20020830 |

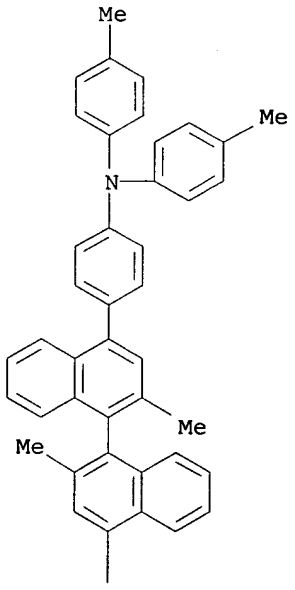
PRIORITY APPLN. INFO.: JP 2002-254876 20020830

AB The organic semiconductor layers provided in the title FETs comprise aromatic amines and condensed heterocyclic amines X1X2N•A•NX3X4 [A = (substd.)alkylene, (substd.)arylene, (substd.)heterocyclic divalent group; X1-4 = (amino-substd.)aryl, (amino-substd.)heterocyclyl; ≥1 of A and/or X1-4 contain aromatic and/or condensed heterocyclic rings]. The organic semiconductor layers have high electron mobility, chemical stability in air, and easy manufacturable by coating process.

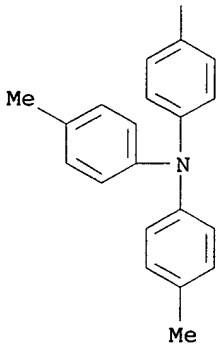
IT **674819-57-9P**
RL: DEV (Device component use); PNU (Preparation, unclassified); PRP (Properties); PREP (Preparation); USES (Uses)
(semiconductor material; aromatic diamine semiconductive field-effect transistors)

RN 674819-57-9 HCAPLUS
CN Benzenamine, 4,4'-(2,2'-dimethyl[1,1'-binaphthalene]-4,4'-diyl)bis[N,N-bis(4-methylphenyl)- (9CI) (CA INDEX NAME)

PAGE 1-A



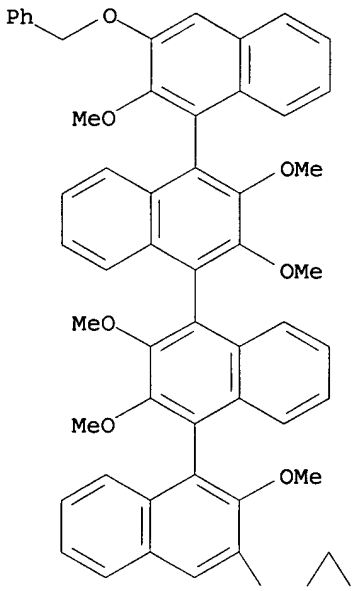
PAGE 2-A




IC ICM H01L051-00
ICS C07C211-54; G02F001-1368; H01L029-786; H01L029-80
CC 76-3 (Electric Phenomena)
Section cross-reference(s): 25, 27, 28
IT 182507-83-1P 528609-95-2P 674819-51-3P 674819-53-5P
674819-55-7P **674819-57-9P**
RL: DEV (Device component use); PNU (Preparation, unclassified); PRP (Properties); PREP (Preparation); USES (Uses)
(semiconductor material; aromatic diamine semiconductive field-effect transistors)

L54 ANSWER 21 OF 51 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2003:960517 HCAPLUS
DOCUMENT NUMBER: 140:163563
TITLE: Synthesis of Optically Active Oligonaphthalenes via Second-Order Asymmetric Transformation
AUTHOR(S): Tsubaki, Kazunori; Miura, Masaya; Morikawa, Hiroshi; Tanaka, Hiroyuki; Kawabata, Takeo; Furuta, Takumi; Tanaka, Kiyoshi; Fuji, Kaoru
CORPORATE SOURCE: Institute for Chemical Research, Kyoto University, Uji, Kyoto, 611-0011, Japan
SOURCE: Journal of the American Chemical Society (2003), 125(52), 16200-16201
CODEN: JACSAT; ISSN: 0002-7863
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 140:163563
AB Synthesis of numerous optically active rod-shaped oligo(2,3-dioxyfunctionalized)naphthalenes connected at their 1,4-positions was achieved using oxidative coupling under CuCl2/α-methylbenzylamine conditions by second-order asym. transformation. We believe this method is practical and should contribute to the field of material science.
IT **651026-29-8P 651026-30-1P 651026-31-2P**
**651026-32-3P 651026-33-4P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation of optically active rod-shaped oligonaphthalenes using oxidative coupling under copper chloride/α-methylbenzylamine conditions by second-order asym. transformation)
RN 651026-29-8 HCAPLUS
CN 1,1':4',1'':4'',1'''-Quaternaphthalene, 2,2',2'',2''',3',3''-hexamethoxy-3,3'''-bis(phenylmethoxy)-, (1S,1''S,1'''S)- (9CI) (CA INDEX NAME)

PAGE 1-A

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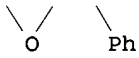
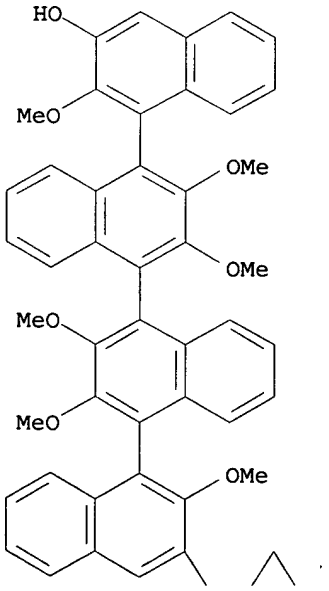
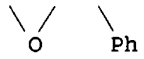



RN 651026-30-1 HCAPLUS
CN [1,1':4',1'':4'',1'''-Quaternaphthalen]-3-ol, 2,2',2'',2''',3',3''-hexamethoxy-3'''-(phenylmethoxy)-, (1S,1''S,1'''S)- (9CI) (CA INDEX NAME)

PAGE 1-A

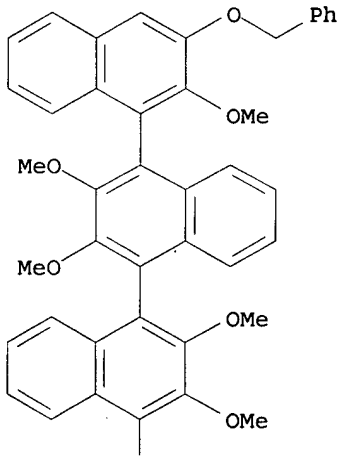


PAGE 2-A



RN 651026-31-2 HCAPLUS
CN [1,1':4',1'':4'',1''':4''',1'''':4'''',1''''':4''''',1'''''':4''''''',1'''''''-Octinaphthalene]-2'''',3'''-diol, 2,2',2'',2''',2''''',2'''''',2''''''',3',3'',3'''',3''''',3''''''-dodecamethoxy-3,3'''''''-bis(phenylmethoxy)-, (1S,1''S,1'''S,1''''S,1'''''S,1''''''S,1'''''''S)- (9CI) (CA INDEX NAME)

PAGE 1-A



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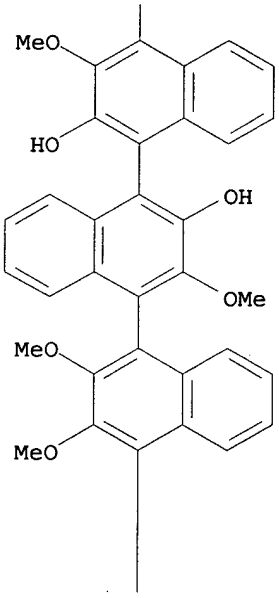


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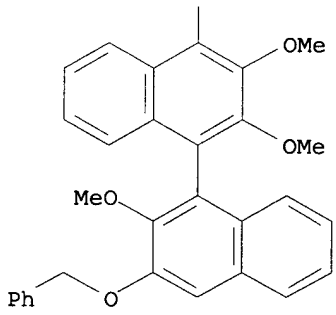
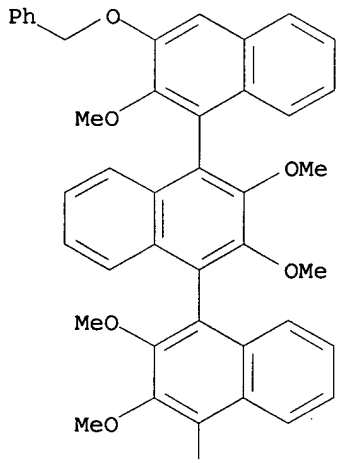



RN 651026-32-3 HCAPLUS
CN 1,1':4',1'':4'',1''':4''',1'''':4'''',1''''':4''''',1'''''':4'''''
',1'''''''-Octinaphthalene, 2,2',2'',2''',2'''',2''''',2'''''',2''
''''',3',3'',3''',3'''',3''''',3''''''-tetradecamethoxy-3,3'''''''-
bis(phenylmethoxy)-, (1S,1''S,1'''S,1''''S,1'''''S,1''''''S,1'''''
''S)- (9CI) (CA INDEX NAME)

PAGE 1-A

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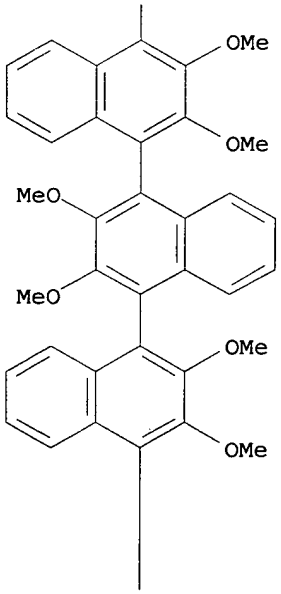

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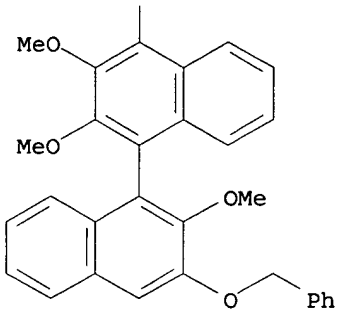
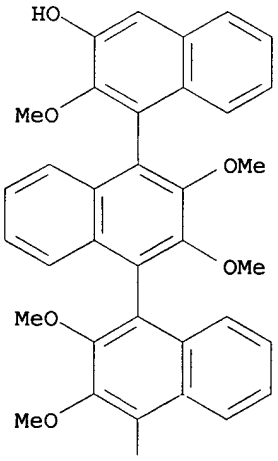
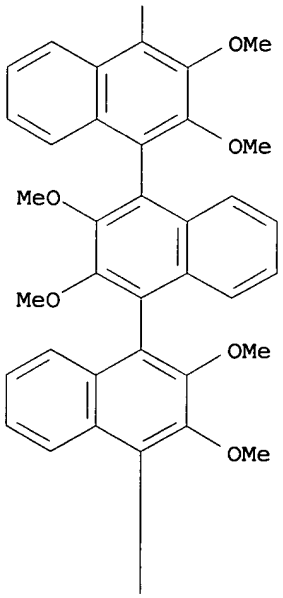



RN 651026-33-4 HCAPLUS
CN [1,1':4',1'':4'',1''':4''',1'''':4'''',1''''':4''''',1'''''':4''''''',1'''''''-Octinaphthalen]-3-ol, 2,2',2'',2''',2'''',2''''',2''''''',2'''''''',3',3'',3''',3'''',3''''',3'''''',3''''''-tetradecamethoxy-3'''''''-(phenylmethoxy)-, (1S,1''S,1'''S,1''''S,1'''''S,1''''''S,1'''''''S)- (9CI) (CA INDEX NAME)

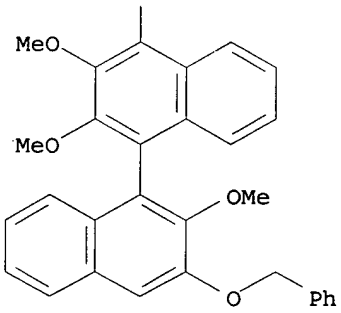
PAGE 1-A



PAGE 2-A




PAGE 3-A

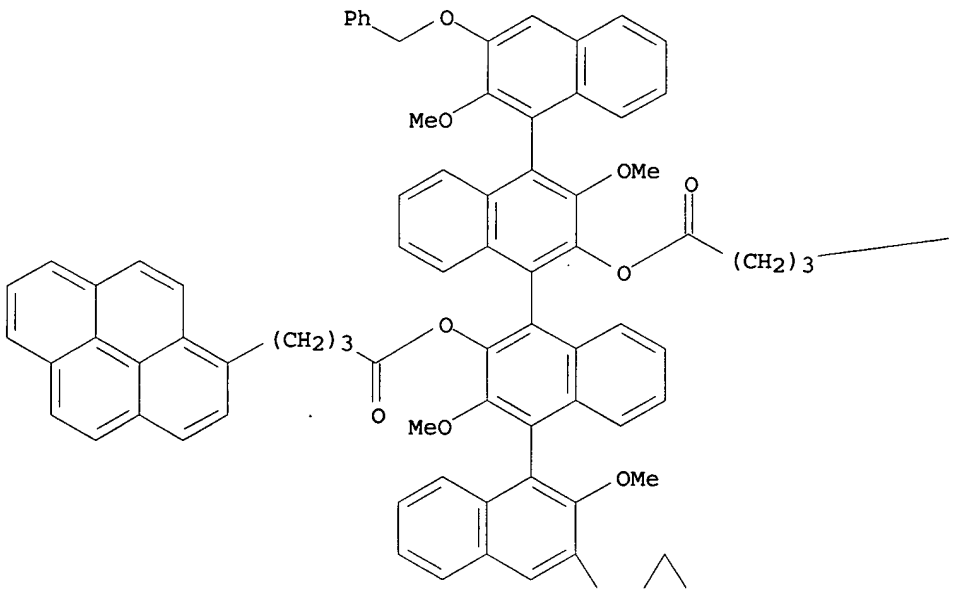



IT **651026-37-8P 651026-38-9P 651299-72-8P**
**651299-89-7P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of optically active rod-shaped oligonaphthalenes using oxidative coupling under copper chloride/α-methylbenzylamine conditions by second-order asym. transformation)

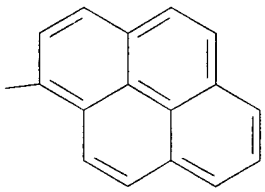
RN 651026-37-8 HCAPLUS

CN 1-Pyrenebutanoic acid, (1S,1''S,1'''S)-2,2',2''',3''-tetramethoxy-3,3'''-bis(phenylmethoxy)[1,1':4',1'':4'',1'''-quaternaphthalene]-2'',3'-diyl ester (9CI) (CA INDEX NAME)

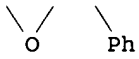
PAGE 1-A




PAGE 1-B

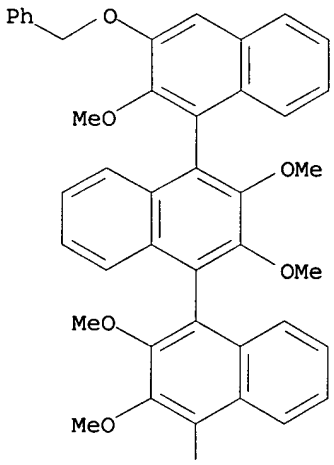


PAGE 2-A

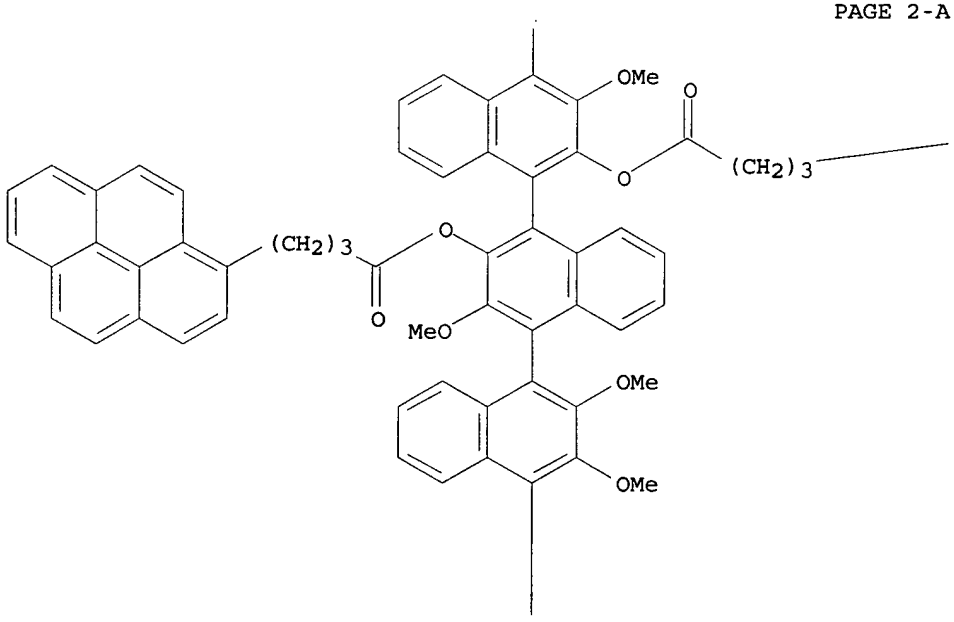



RN 651026-38-9 HCAPLUS
CN 1-Pyrenebutanoic acid, (1S,1''S,1'''S,1''''S,1'''''S,1''''''S,1'''''''S)-2,2',2'',2''',2'''',2''''',2'''''',2''''''',3',3'',3''',3'''',3''''',3''''''-dodecamethoxy-3,3'''''''-bis(phenylmethoxy)[1,1':4',1'':4'',1''':4''',1'''':4'''',1''''':4''''',1'''''':4'''''',1''''''':4''''''',1'''''''-octinaphthalene]-2'''',3'''-diyl ester (9CI) (CA INDEX NAME)

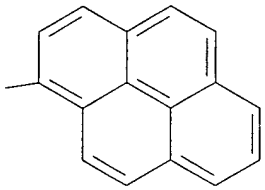
PAGE 1-A



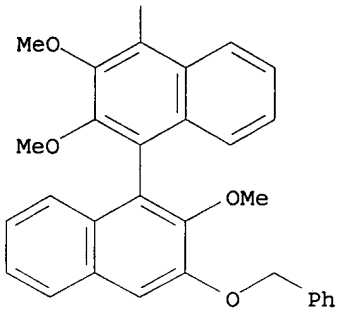

PAGE 2-A



PAGE 2-B

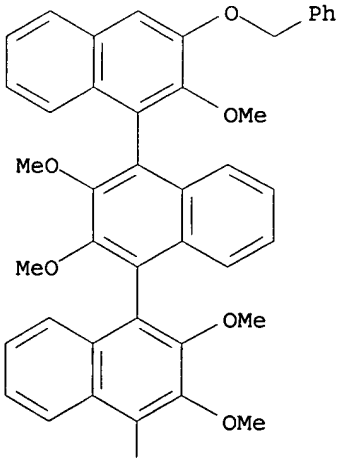


PAGE 3-A

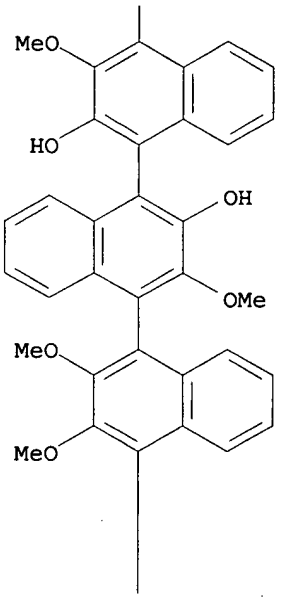



RN 651299-72-8 HCAPLUS
CN [1,1':4',1'':4'',1''':4''',1'''':4'''',1''''':4''''',1'''''':4''''''',1'''''''-Octinaphthalene]-2'''',3'''-diol, 2,2',2'',2''',2''''',2'''''',2''''''',3',3'',3'''',3''''',3''''''-dodecamethoxy-3,3'''''''-bis(phenylmethoxy)-, (1S,1''S,1'''S,1''''R,1'''''S,1''''''S,1'''''''S)- (9CI) (CA INDEX NAME)

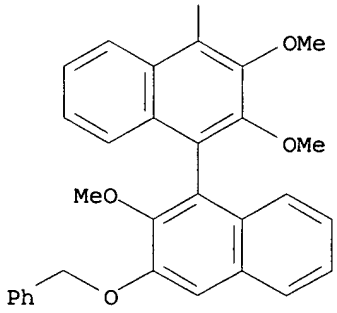
PAGE 1-A



PAGE 2-A

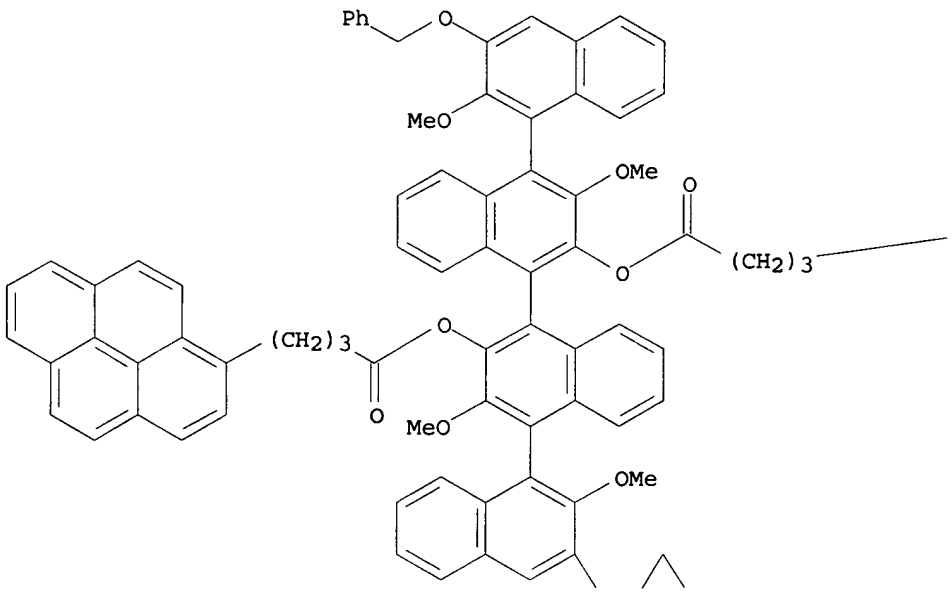



PAGE 3-A

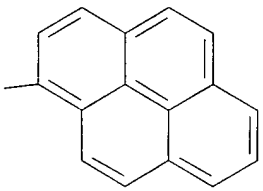



RN 651299-89-7 HCAPLUS
CN 1-Pyrenebutanoic acid, (1S,1''R,1'''S)-2,2',2''',3''-tetramethoxy-3,3'''-bis(phenylmethoxy)[1,1':4',1'':4'',1'''-quaternaphthalene]-2'',3'-diyl ester (9CI) (CA INDEX NAME)

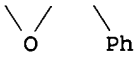
PAGE 1-A



PAGE 1-B



PAGE 2-A



CC 25-24 (Benzene, Its Derivatives, and Condensed Benzenoid Compounds)

IT 651026-26-5P 651026-27-6P 651026-28-7P **651026-29-8P** **651026-30-1P** **651026-31-2P** **651026-32-3P** **651026-33-4P** 651299-71-7P 656832-06-3P 656832-07-4P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation of optically active rod-shaped oligonaphthalenes using oxidative coupling under copper chloride/α-methylbenzylamine conditions by second-order asym. transformation)

IT 651026-36-7P **651026-37-8P** **651026-38-9P** **651299-72-8P** **651299-89-7P** 656832-08-5P

656832-09-6P 656832-11-0P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of optically active rod-shaped oligonaphthalenes using oxidative coupling under copper chloride/α-methylbenzylamine conditions by second-order asym. transformation)

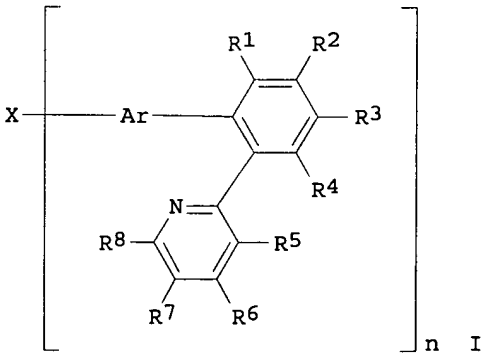
REFERENCE COUNT: 13 THERE ARE 13 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L54 ANSWER 22 OF 51 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2003:773843 HCAPLUS
DOCUMENT NUMBER: 139:298985
TITLE: Organic **electroluminescent** device and display with phenyl pyridine derivative
INVENTOR(S): Kita, Hiroshi; Yamada, Taketoshi; Matsuura, Mitsunobu; Inoue, Yoshio; Oi, Shuichi; Takayama, Shoichi
PATENT ASSIGNEE(S): Konica Co., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 26 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| JP 2003282270 | A2 | 20031003 | JP 2002-82918 | 2002 0325 |

PRIORITY APPLN. INFO.: JP 2002-82918 2002 0325

OTHER SOURCE(S): MARPAT 139:298985
GI



I

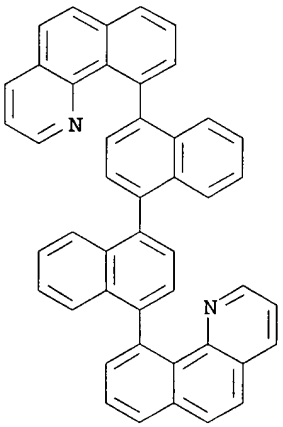
AB The invention refers to an organic **electroluminescent** device comprising at least one Ph pyridine compound I [Z = n-valent bridging group or single bond; Ar = divalent arylene; R1-8 - H or substituent wherein adjacent groups may join to form rings; n = 2 - 6].

IT **474304-10-4**
RL: DEV (Device component use); USES (Uses)

(organic **electroluminescent** device and display with Ph pyridine derivative)

RN 474304-10-4 HCAPLUS

CN Benzo[h]quinoline, 10,10'-[1,1'-binaphthalene]-4,4'-diylbis- (9CI) (CA INDEX NAME)



IC ICM H05B033-22
ICS C09K011-06; H05B033-14

CC 73-11 (**Optical**, Electron, and Mass Spectroscopy and Other Related Properties)

ST **electroluminescent** display device phenyl pyridine

IT **Electroluminescent** devices
(displays; organic **electroluminescent** device and display with Ph pyridine derivative)

IT **Luminescent** screens
(**electroluminescent**; **organic electroluminescent** device and display with Ph pyridine derivative)

IT **474304-10-4** 608145-69-3 608145-70-6 608145-72-8
608145-73-9 608145-74-0 608145-75-1 608145-76-2
608145-77-3 608145-78-4 608145-79-5 608145-80-8
608145-81-9 608145-82-0 608145-83-1 608145-84-2
608145-85-3 608145-86-4 608145-87-5 608145-88-6
608145-89-7 608145-90-0 608145-91-1 608145-92-2
RL: DEV (Device component use); USES (Uses)
(organic **electroluminescent** device and display with Ph pyridine derivative)

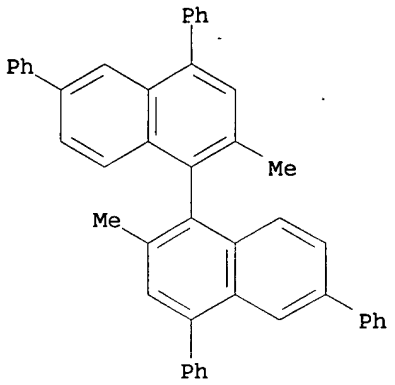
L54 ANSWER 23 OF 51 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2003:442711 HCAPLUS
DOCUMENT NUMBER: 139:246185
TITLE: Symmetrical 4,4',6,6'-tetraarylbinaphthyl-substituted ammonium bromide as a new, chiral phase-transfer catalyst
AUTHOR(S): Hashimoto, Takuya; Tanaka, Youhei; Maruoka, Keiji
CORPORATE SOURCE: Graduate School of Science, Department of Chemistry, Kyoto University, Kyoto, 606-8502, Japan
SOURCE: Tetrahedron: Asymmetry (2003), 14(12), 1599-1602
CODEN: TASYE3; ISSN: 0957-4166
PUBLISHER: Elsevier Science B.V.
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 139:246185

not electrolum.

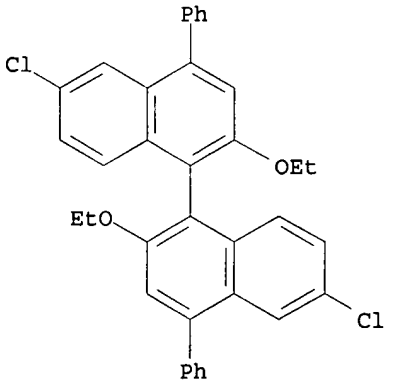
AB Binaphthyl-modified spiro-type sym. phase-transfer catalysts possessing 4,4',6,6'-tetraaryl substituents are shown to exhibit high asym. induction in asym. alkylation of benzophenone imine glycine tert-Bu ester under ordinary phase-transfer conditions.

IT **583050-13-9P 583050-16-2P 583050-17-3P**
**583050-20-8P 583050-21-9P 596107-96-9P**
**596107-97-0P 596107-98-1P 596107-99-2P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation of tetraarylbinaphthyl-substituted ammonium bromides as chiral phase-transfer catalysts and their using for asym. alkylation of benzophenone imine glycine tert-Bu ester)

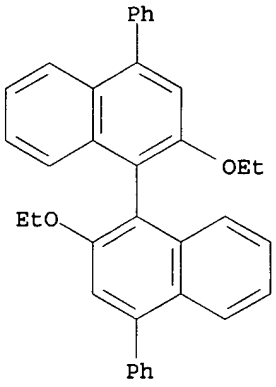
RN 583050-13-9 HCAPLUS
CN 1,1'-Binaphthalene, 2,2'-dimethyl-4,4',6,6'-tetraphenyl-, (1S)- (9CI) (CA INDEX NAME)



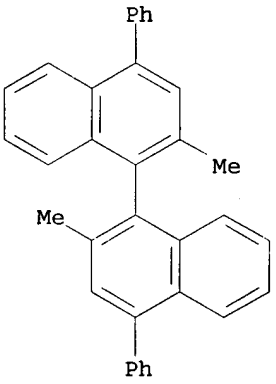

RN 583050-16-2 HCAPLUS
CN 1,1'-Binaphthalene, 6,6'-dichloro-2,2'-diethoxy-4,4'-diphenyl-, (1S)- (9CI) (CA INDEX NAME)



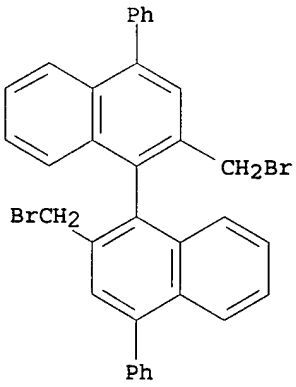

RN 583050-17-3 HCAPLUS
CN 1,1'-Binaphthalene, 2,2'-diethoxy-4,4'-diphenyl-, (1S)- (9CI) (CA INDEX NAME)




RN 583050-20-8 HCAPLUS
CN 1,1'-Binaphthalene, 2,2'-dimethyl-4,4'-diphenyl-, (1S)- (9CI) (CA INDEX NAME)

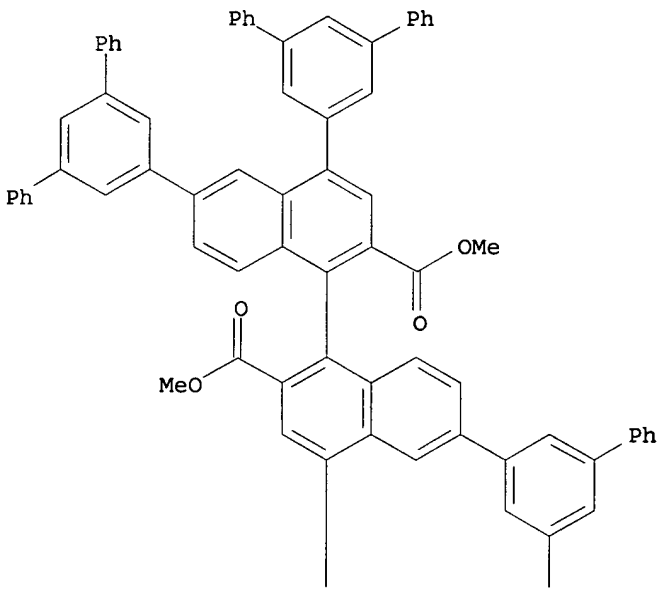



RN 583050-21-9 HCAPLUS
CN 1,1'-Binaphthalene, 2,2'-bis(bromomethyl)-4,4'-diphenyl-, (1S)- (9CI) (CA INDEX NAME)




RN 596107-96-9 HCAPLUS
CN [1,1'-Binaphthalene]-2,2'-dicarboxylic acid, 4,4',6,6'-tetrakis([1,1':3',1''-terphenyl]-5'-yl)-, dimethyl ester, (1S)- (9CI) (CA INDEX NAME)

PAGE 1-A

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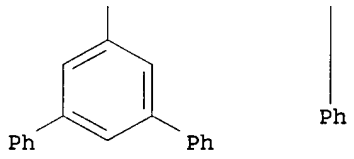
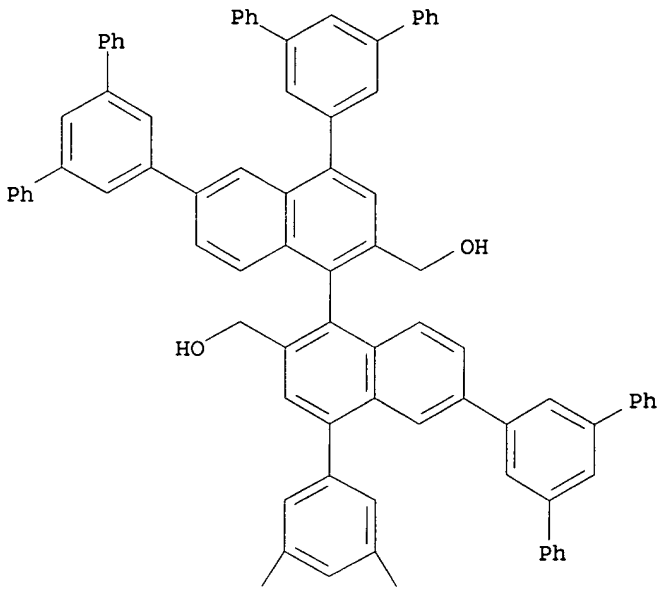



RN 596107-97-0 HCAPLUS
CN [1,1'-Binaphthalene]-2,2'-dimethanol, 4,4',6,6'-tetrakis([1,1':3',1''-terphenyl]-5'-yl)-, (1S)- (9CI) (CA INDEX NAME)

PAGE 1-A

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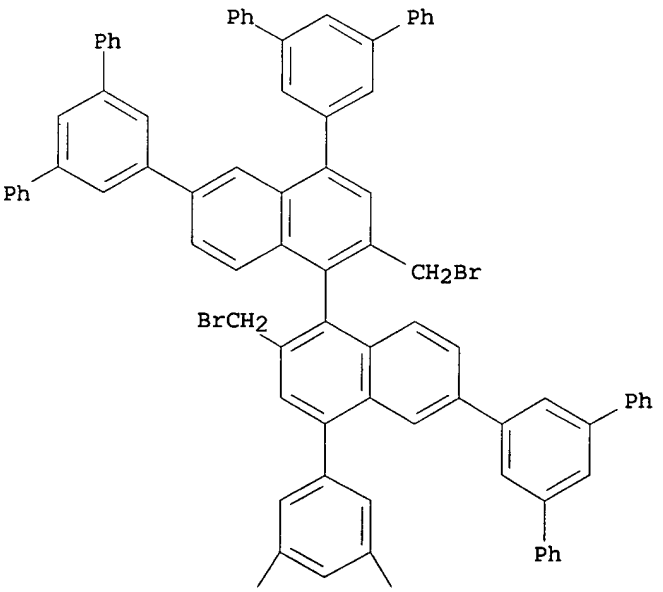
RN 596107-98-1 HCAPLUS
CN 1,1'-Binaphthalene, 2,2'-bis(bromomethyl)-4,4',6,6'-tetrakis([1,1':3',1''-terphenyl]-5'-yl)-, (1S)- (9CI) (CA INDEX NAME)

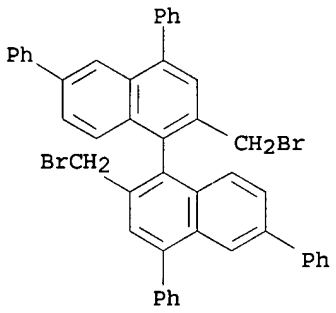
PAGE 1-A



PAGE 2-A

Ph Ph

RN 596107-99-2 HCAPLUS
CN 1,1'-Binaphthalene, 2,2'-bis(bromomethyl)-4,4',6,6'-tetraphenyl- (9CI) (CA INDEX NAME)




CC 34-2 (Amino Acids, Peptides, and Proteins)
Section cross-reference(s): 25
IT 583050-12-8P **583050-13-9P 583050-16-2P**
**583050-17-3P** 583050-18-4P 583050-19-5P
**583050-20-8P 583050-21-9P 596107-96-9P**
**596107-97-0P 596107-98-1P 596107-99-2P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation of tetraarylbinaphthyl-substituted ammonium bromides as chiral phase-transfer catalysts and their using for asym. alkylation of benzophenone imine glycine tert-Bu ester)
REFERENCE COUNT: 21 THERE ARE 21 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L54 ANSWER 24 OF 51 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2003:317784 HCAPLUS
DOCUMENT NUMBER: 138:346233
TITLE: Organic **electroluminescent** component with 1,10-phenanthroline derivative
INVENTOR(S): Kita, Hiroshi; Yamada, Taketoshi
PATENT ASSIGNEE(S): Konica Co., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 25 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| JP 2003123983 | A2 | 20030425 | JP 2001-312533 | 2001 1010 |
| PRIORITY APPLN. INFO.: | | | JP 2001-312533 | 2001 1010 |

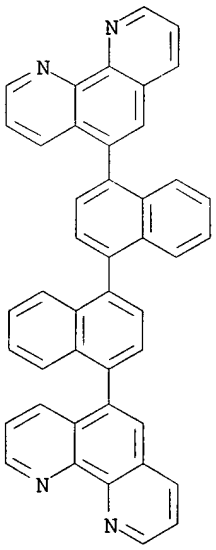
OTHER SOURCE(S): MARPAT 138:346233

AB The invention refers to an organic **electroluminescent** component comprising a compound with 2 - 8 of 1,10-phenanthroline moieties linked by bonds or by bridging groups, where the phenanthrolines may be substituted and the substituents may join together to form rings. Luminous brightness it improves and the **organic electro- luminescence** element, and its **organic electro- luminescence** element which are converted long-lived were used elec. power consumption, it offers the long-lived display low. The **organic electro- luminescence** element which features that at least 1 kind of chemical compound where the organic layer which it forms in 1 layer, is shown at least with the below-mentioned general formula (1) is contained.

IT **515142-76-4**
RL: DEV (Device component use); USES (Uses)
(organic **electroluminescent** component with 1,10-phenanthroline derivative)

RN 515142-76-4 HCAPLUS

CN 1,10-Phenanthroline, 5,5'-[1,1'-binaphthalene]-4,4'-diylbis- (9CI) (CA INDEX NAME)



IC ICM H05B033-22
ICS C09K011-06; G09F009-30; H05B033-12; H05B033-14

CC 73-11 (**Optical**, Electron, and Mass Spectroscopy and Other Related Properties)

ST **electroluminescent** device phenanthroline

IT **Electroluminescent** devices
(organic **electroluminescent** component with 1,10-phenanthroline derivative)

IT 66-71-7, 1-10-Phenanthroline
RL: DEV (Device component use); USES (Uses)
(derivs.; organic **electroluminescent** component with 1,10-phenanthroline derivative)

IT 4392-83-0, 2,2':6',2'':6'',2'''-Quaterpyridine 105440-22-0
142608-59-1 158753-10-7 515142-75-3 **515142-76-4**
515142-77-5 515142-78-6 515142-79-7 515142-80-0
515142-81-1 515142-82-2 515142-83-3 515142-84-4
RL: DEV (Device component use); USES (Uses)
(organic **electroluminescent** component with

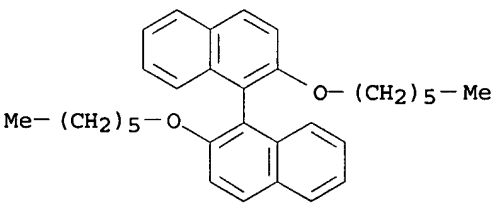
1,10-phenanthroline derivative)

L54 ANSWER 25 OF 51 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2003:295393 HCAPLUS
DOCUMENT NUMBER: 139:28436
TITLE: New Series of Blue-Emitting and Electron-Transporting Copolymers Based on Cyanostilbene
AUTHOR(S): Zhan, Xiaowei; Wang, Shuai; Liu, Yunqi; Wu, Xia; Zhu, Daoben
CORPORATE SOURCE: Center for Molecular Science, Institute of Chemistry, Chinese Academy of Sciences, Beijing, 100080, Peop. Rep. China
SOURCE: Chemistry of Materials (2003), 15(10), 1963-1969
CODEN: CMATEX; ISSN: 0897-4756
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English

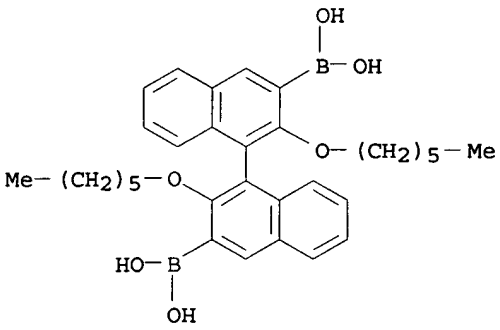
AB Conjugated copolymers having fluorene and binaphthyl moieties in the main chain and based on cyanostilbene were synthesized in good yields by a Pd-catalyzed Suzuki coupling reaction, a new approach different from the traditional Knoevenagel condensation polymerization Through controllable modification of the main chain structures, not only were the thermal, electronic, and optical properties of the polymers tuned, but also the structure-property relations were studied. All these polymers possess excellent thermal stability with glass-transition temps. of 60-159° and onset decomposition temps. of 411-417°. Cyclic voltammetry studies reveal that these copolymers have low-lying LUMO energy levels ranging from -2.92 to -3.08 eV and low-lying HOMO energy levels ranging from -6.01 to -6.13 eV, and they may be promising candidates for electron-transporting or hole-blocking materials in **light -emitting** diodes (LEDs). The polymers in thin films emit strong blue luminance around 457-489 nm with narrow bandwidth upon photoexcitation. The single-layer LED fabricated with a copolymer F-CN composed of fluorene and cyanostilbene units using an air-stable Al **electrode emits** blue **light** with an external quantum efficiency of 0.006%. A double-layer LED, fabricated using a blend of poly(N-vinylcarbazole) and F-CN as emitting layer and tris(8-hydroxyquinolinato)aluminum as electron transporting layer, shows an external quantum efficiency of 0.2%. Preliminary **electroluminescent** results show that these polymers are new candidates for blue emissive materials in polymeric LEDs.

IT **199009-48-8 538349-13-2 538349-14-3**
RL: RCT (Reactant); RACT (Reactant or reagent)
(blue-emitting and electron-transporting copolymers based on cyanostilbene synthesized using)

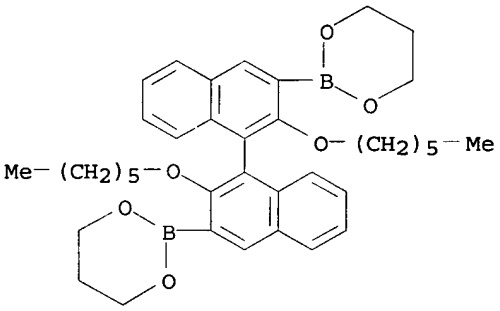
RN 199009-48-8 HCAPLUS
CN 1,1'-Binaphthalene, 2,2'-bis(hexyloxy)- (9CI) (CA INDEX NAME)




RN 538349-13-2 HCAPLUS
CN Boronic acid, [2,2'-bis(hexyloxy)[1,1'-binaphthalene]-3,3'-diyl]bis- (9CI) (CA INDEX NAME)



RN 538349-14-3 HCAPLUS
CN 1,3,2-Dioxaborinane, 2,2'-[2,2'-bis(hexyloxy)[1,1'-binaphthalene]-3,3'-diyl]bis- (9CI) (CA INDEX NAME)

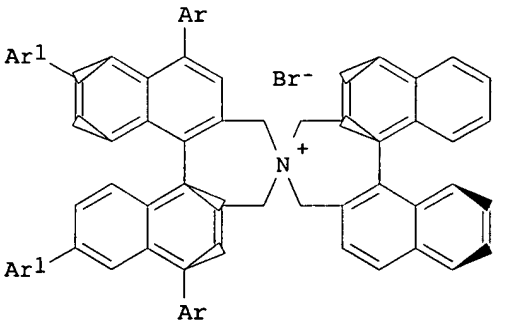


CC 73-11 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)
Section cross-reference(s): 25, 35, 36, 72, 76, 77
ST cyanostilbene deriv copolymer LED elec optical property; decompn cyanostilbene deriv copolymer LED; film cyanostilbene deriv copolymer LED; luminescence cyanostilbene deriv copolymer LED; hydroxyquinoline aluminum LED cyanostilbene deriv copolymer; thermogravimetry cyanostilbene deriv copolymer LED; DSC cyanostilbene deriv copolymer LED; **electroluminescence** cyanostilbene deriv copolymer LED; electron transport cyanostilbene deriv copolymer LED; thermal stability cyanostilbene deriv copolymer LED; cyclic voltammetry cyanostilbene deriv copolymer LED; IR spectra cyanostilbene deriv copolymer LED; NMR spectra cyanostilbene deriv copolymer LED; UV spectra cyanostilbene deriv copolymer LED; electrochem oxidn redn cyanostilbene deriv copolymer LED; Suzuki coupling reaction cyanostilbene deriv copolymer LED; glass transition temp cyanostilbene deriv copolymer LED; band gap cyanostilbene deriv copolymer LED; current voltage cyanostilbene deriv copolymer LED; electronic structure cyanostilbene deriv copolymer LED
IT Films
(blue-emitting and electron-transporting copolymers based on cyanostilbene in film **LEDs**)
IT Electric current-potential relationship
Luminescence, **electroluminescence**
(blue-emitting and electron-transporting copolymers based on cyanostilbene in film **LEDs** with)
IT **Electroluminescent** devices
(thin-film; blue-emitting and electron-transporting copolymers based on cyanostilbene in)

IT 412004-41-2
RL: DEV (Device component use); MOA (Modifier or additive use); POF (Polymer in formulation); PRP (Properties); USES (Uses)
(blue-emitting and electron-transporting copolymers based on cyanostilbene in film **LEDs**)
IT 538349-15-4P 538349-16-5P
RL: DEV (Device component use); PRP (Properties); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)
(blue-emitting and electron-transporting copolymers based on cyanostilbene in film **LEDs**)
IT 25067-59-8, Poly(N-vinylcarbazole)
RL: DEV (Device component use); POF (Polymer in formulation); PRP (Properties); USES (Uses)
(blue-emitting and electron-transporting copolymers based on cyanostilbene in film **LEDs** as blend with)
IT 2085-33-8, Alq3
RL: DEV (Device component use); USES (Uses)
(blue-emitting and electron-transporting copolymers based on cyanostilbene in film **LEDs** containing)
IT 109-72-8, n-Butyl lithium, reactions 121-43-7, Trimethoxyborane 504-63-2, 1,3-Dihydroxypropane 602-09-5, [1,1'-Binaphthalene]-2,2'-diol 638-45-9, 1-Iodohexane 33731-82-7 171089-85-3
**199009-48-8** 241802-45-9 344782-49-6
**538349-13-2 538349-14-3**
RL: RCT (Reactant); RACT (Reactant or reagent)
(blue-emitting and electron-transporting copolymers based on cyanostilbene synthesized using)
REFERENCE COUNT: 62 THERE ARE 62 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L54 ANSWER 26 OF 51 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2003:262843 HCAPLUS
DOCUMENT NUMBER: 139:197246
TITLE: Substituent effect of binaphthyl-modified spiro-type chiral phase-transfer catalysts
AUTHOR(S): Hashimoto, Takuya; Maruoka, Keiji
CORPORATE SOURCE: Graduate School of Science, Department of Chemistry, Kyoto University, Kyoto, 606-8502, Japan
SOURCE: Tetrahedron Letters (2003), 44(16), 3313-3316
CODEN: TELEAY; ISSN: 0040-4039
PUBLISHER: Elsevier Science Ltd.
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 139:197246
GI

not electrolum.

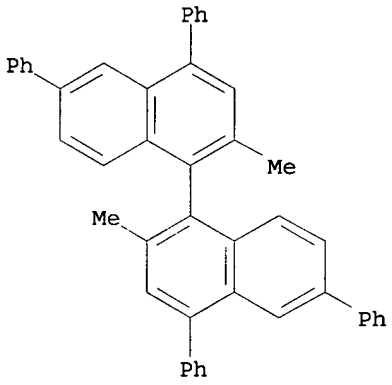



I

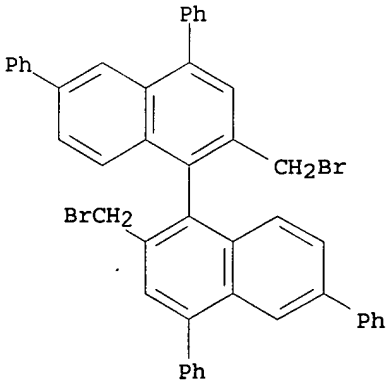
AB Binaphthyl-modified spiro-type phase-transfer catalysts possessing 4,4'-diaryl substituents are shown to exhibit high asym. induction in the benzylation of Ph2C:NCH2CO2Bu-t under phase-transfer conditions. For example, spiro (diaryl)binaphthalene derivs. I-III (Ar = Ar1 = Ph; Ar = Ph, Ar1 = H; Ar = Ar1 = 3,5-diphenylphenyl) were prepared and used as chiral catalysts for the asym. alkylation of Ph2C:NCH2CO2Bu-t with RBr (R = benzyl, allyl, methallyl, propargyl, 4-fluorobenzyl, 1-naphthylmethyl).

IT **583050-13-9P 583050-14-0P 583050-16-2P**
**583050-17-3P 583050-20-8P 583050-21-9P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation of spiro binaphthyl derivs. as chiral phase-transfer catalysts for asym. alkylation of N-(diphenylmethylene)glycinate)

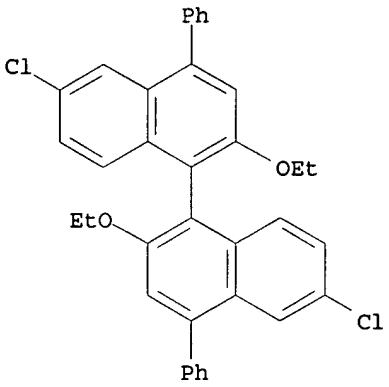
RN 583050-13-9 HCAPLUS
CN 1,1'-Binaphthalene, 2,2'-dimethyl-4,4',6,6'-tetraphenyl-, (1S)- (9CI) (CA INDEX NAME)



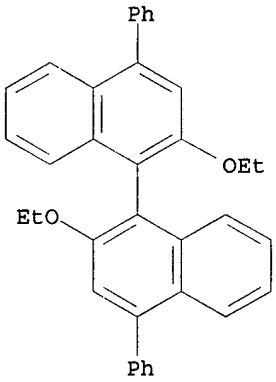

RN 583050-14-0 HCAPLUS
CN 1,1'-Binaphthalene, 2,2'-bis(bromomethyl)-4,4',6,6'-tetraphenyl-, (1S)- (9CI) (CA INDEX NAME)



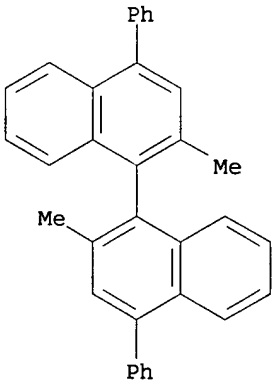

RN 583050-16-2 HCAPLUS
CN 1,1'-Binaphthalene, 6,6'-dichloro-2,2'-diethoxy-4,4'-diphenyl-, (1S)- (9CI) (CA INDEX NAME)



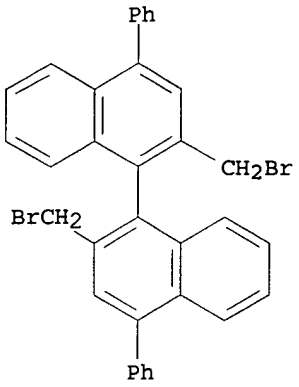

RN 583050-17-3 HCAPLUS
CN 1,1'-Binaphthalene, 2,2'-diethoxy-4,4'-diphenyl-, (1S)- (9CI) (CA INDEX NAME)




RN 583050-20-8 HCAPLUS
CN 1,1'-Binaphthalene, 2,2'-dimethyl-4,4'-diphenyl-, (1S)- (9CI) (CA INDEX NAME)




RN 583050-21-9 HCAPLUS
CN 1,1'-Binaphthalene, 2,2'-bis(bromomethyl)-4,4'-diphenyl-, (1S)- (9CI) (CA INDEX NAME)



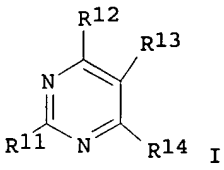

CC 25-24 (Benzene, Its Derivatives, and Condensed Benzenoid Compounds)
Section cross-reference(s): 34
IT 583050-12-8P **583050-13-9P 583050-14-0P**
**583050-16-2P 583050-17-3P** 583050-18-4P
583050-19-5P **583050-20-8P 583050-21-9P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation of spiro binaphthyl derivs. as chiral phase-transfer catalysts for asym. alkylation of N-(diphenylmethylene)glycinate)
REFERENCE COUNT: 19 THERE ARE 19 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L54 ANSWER 27 OF 51 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2003:116880 HCAPLUS
DOCUMENT NUMBER: 138:178005
TITLE: Aromatic heterocyclic derivatives and organic **electroluminescent** device using them
INVENTOR(S): Matsuura, Mitsunobu; Yamada, Taketoshi; Kita, Hiroshi
PATENT ASSIGNEE(S): Konica Co., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 38 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

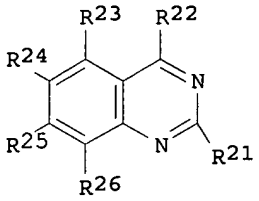
| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| JP 2003045662 | A2 | 20030214 | JP 2001-233461 | 2001 0801 |

PRIORITY APPLN. INFO.: JP 2001-233461 2001 0801

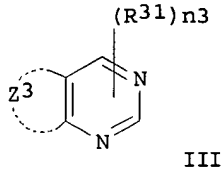
OTHER SOURCE(S): MARPAT 138:178005
GI



I



II



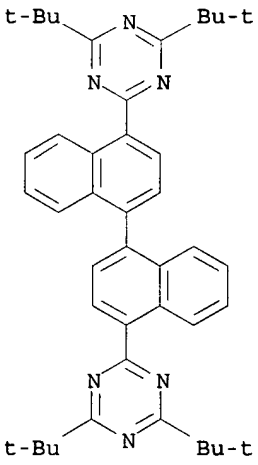
III

AB The invention relates to an organic **electroluminescent** device comprising a pair of **electrodes** sandwiching ≥1 layer(s) containing ≥1 of I, II, or III (R11-14 = H or monovalent substituent; ≥1 of R11-14 = aromatic hydrocarbonyl; R21-26 = H or monovalent substituent; R31 = H or monovalent substituent; n3 = 0 - 2; Z3 = 5-membered ring moiety).

IT **497097-41-3**
RL: DEV (Device component use); USES (Uses)
(novel aromatic heterocyclic derivs. for organic **electroluminescent** device)

RN 497097-41-3 HCAPLUS

CN 1,3,5-Triazine, 2,2'-[1,1'-binaphthalene]-4,4'-diylbis[4,6-bis(1,1-dimethylethyl)- (9CI) (CA INDEX NAME)




IC ICM H05B033-22
ICS C09K011-06; G09F009-30; H05B033-12; H05B033-14

CC 73-11 (**Optical**, Electron, and Mass Spectroscopy and Other Related Properties)
Section cross-reference(s): 28

ST **electroluminescent** device arom heterocyclic deriv

IT **Electroluminescent** devices
(novel aromatic heterocyclic derivs. for)

IT 124729-98-2
RL: DEV (Device component use); USES (Uses)
(hole transporting; novel aromatic heterocyclic derivs. for organic **electroluminescent** device)

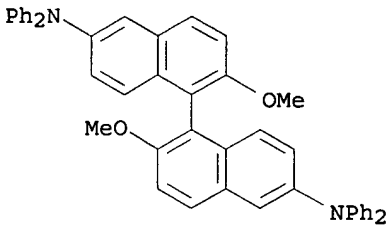
IT 4733-39-5 19205-19-7 142289-08-5 144810-07-1 405171-87-1
405173-85-5 497097-14-0 497097-15-1 497097-17-3
497097-19-5 497097-21-9 497097-23-1 497097-26-4
497097-28-6 497097-30-0 497097-32-2 497097-34-4
497097-36-6 497097-38-8 497097-40-2 **497097-41-3**
497097-42-4 497097-43-5 497097-44-6 497097-45-7
497097-46-8

RL: DEV (Device component use); USES (Uses)
(novel aromatic heterocyclic derivs. for organic **electroluminescent** device)

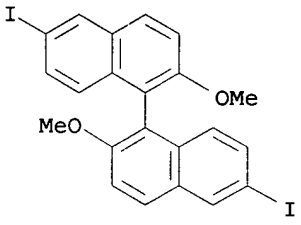
L54 ANSWER 28 OF 51 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2003:68570 HCAPLUS
DOCUMENT NUMBER: 138:129100
TITLE: Binaphtyl compounds for hole-transporting layers, their manufacture, and organic **electroluminescent** devices with the layers
INVENTOR(S): Takeuchi, Masako; Sato, Yoshiharu
PATENT ASSIGNEE(S): Mitsubishi Chemical Corp., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 20 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| JP 2003026641 | A2 | 20030129 | JP 2001-213993 | 2001 0713 |
| PRIORITY APPLN. INFO.: | | | JP 2001-213993 | 2001 0713 |

OTHER SOURCE(S): MARPAT 138:129100
AB The binaphthyl compds. are represented by binaphthyl [Ar1-Ar4 = monocyclic group or condensed ring group of (substituted) 5- or 6-membered aromatic hydrocarbon ring or aromatic heterocyclic ring; Ar1 and Ar2, or Ar3 and Ar4; m, n = 0-4 integer; m + n ≥ 1; the naphthalene ring may have other substituents]. The substituents NAr1Ar2 and NAr3Ar4 are introduced to I by replacing halogen substituents on the binaphthyl backbones with aromatic amine derivs. or by replacing NH2 substituents on the binaphthyl backbones with aromatic halides. The organic **electroluminescent** (**EL** ) devices have layers involving I between **anodes** and **cathodes** and optionally luminescent layers between the **cathodes** and. The organic **electroluminescent** ( **EL**) devices involve laminate of **anodes**, hole-transporting layers containing I, luminescent layers, and **cathodes.** The **EL** device have improved heat resistance, can be operated by low driving voltage, and show stable luminescent property.
IT **491610-58-3P**
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(manufacture of binaphthyl compds. for heat-resistant hole-transporting layers of organic **EL** devices)
RN 491610-58-3 HCAPLUS
CN [1,1'-Binaphthalene]-6,6'-diamine, 2,2'-dimethoxy-N,N,N',N'-tetraphenyl- (9CI) (CA INDEX NAME)




IT **491610-62-9**
RL: RCT (Reactant); RACT (Reactant or reagent)
(reactant for manufacture of binaphthyl compds. for heat-resistant hole-transporting layers of organic **EL** devices)
RN 491610-62-9 HCAPLUS
CN 1,1'-Binaphthalene, 6,6'-diiodo-2,2'-dimethoxy- (9CI) (CA INDEX NAME)




IC ICM C07C217-94
ICS C07C213-02; H05B033-14; H05B033-22
CC 74-13 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
Section cross-reference(s): 25
ST org **electroluminescent** device binaphthyl hole transporting layer
IT **Electroluminescent** devices
(manufacture of binaphthyl compds. for heat-resistant hole-transporting layers of organic **EL** devices)
IT 517-51-1, Rubren
RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)
(luminescent layer containing; manufacture of binaphthyl compds. for heat-resistant hole-transporting layers of organic **EL** devices)
IT 2085-33-8, Alq3
RL: TEM (Technical or engineered material use); USES (Uses)
(luminescent layer; manufacture of binaphthyl compds. for heat-resistant hole-transporting layers of organic **EL** devices)
IT **491610-58-3P**
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(manufacture of binaphthyl compds. for heat-resistant hole-transporting layers of organic **EL** devices)
IT 122-39-4, Diphenylamine, reactions **491610-62-9**
RL: RCT (Reactant); RACT (Reactant or reagent)
(reactant for manufacture of binaphthyl compds. for heat-resistant hole-transporting layers of organic **EL** devices)

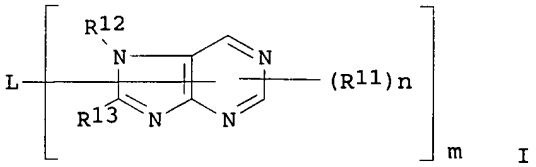
L54 ANSWER 29 OF 51 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2002:900820 HCAPLUS
DOCUMENT NUMBER: 137:390864

TITLE: **Electroluminescent** devices with good storage stability and brightness, and compounds having multiple purine structures for them
INVENTOR(S): Kimura, Keizo
PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 44 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| JP 2002338579 | A2 | 20021127 | JP 2001-325594 | 20011023 |
| US 2003072965 | A1 | 20030417 | US 2002-97607 | 20020315 |
| US 6780529 | B2 | 20040824 | | |

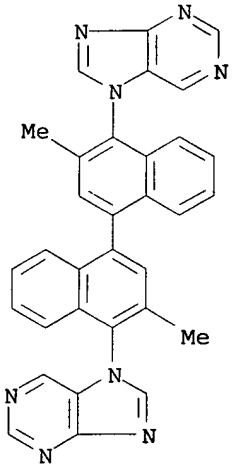
PRIORITY APPLN. INFO.: JP 2001-76704 A 20010316
JP 2001-325594 A 20011023

OTHER SOURCE(S): MARPAT 137:390864
GI




I

AB The device contains purine-based compds. I (R11 = substituent; R12 = H, aliphatic hydrocarbyl, aryl, hetero ring group; R13 = H, substituent; L = single bond, linking group; n = 0-2; m ≥2) in **light-emitting** layers.
IT **476169-83-2**
RL: DEV (Device component use); USES (Uses)
(**electroluminescent** devices with good storage stability and brightness containing hetero compds. having multiple purine structures)
RN 476169-83-2 HCAPLUS
CN 7H-Purine, 7,7'-(3,3'-dimethyl[1,1'-binaphthalene]-4,4'-diyl)bis- (9CI) (CA INDEX NAME)



IC ICM C07D519-00
ICS C09K011-06; H05B033-14; H05B033-22
CC 73-11 (**Optical**, Electron, and Mass Spectroscopy and Other Related Properties)
Section cross-reference(s): 28
ST purine charge transfer **electroluminescent** device; storage stability **EL** device purine host
IT **Electroluminescent** devices
(**electroluminescent** devices with good storage stability and brightness containing hetero compds. having multiple purine structures)
IT 476169-79-6 476169-80-9 476169-81-0 476169-82-1
**476169-83-2** 476169-84-3 476169-85-4 476169-86-5
476169-87-6 476169-88-7 476169-89-8 476169-90-1
RL: DEV (Device component use); USES (Uses)
(**electroluminescent** devices with good storage stability and brightness containing hetero compds. having multiple purine structures)
IT 476169-66-1P 476169-68-3P 476169-70-7P 476169-72-9P
476169-74-1P 476169-76-3P 476169-77-4P 476169-78-5P
RL: DEV (Device component use); IMF (Industrial manufacture); PREP (Preparation); USES (Uses)
(**electroluminescent** devices with good storage stability and brightness containing hetero compds. having multiple purine structures)
IT 1454-80-4P, [1,1'-Biphenyl]-2,2'-diamine 2346-74-9P
34890-62-5P 476169-67-2P 476169-69-4P 476169-71-8P
476169-73-0P 476169-75-2P
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)
(**electroluminescent** devices with good storage stability and brightness containing hetero compds. having multiple purine structures)
IT 80-05-7, Bisphenol A, reactions 87-42-3 95-80-7 106-50-3, 1,4-Diaminobenzene, reactions 107-14-2, Chloroacetonitrile 108-72-5, 1,3,5-Triaminobenzene 590-17-0, Bromoacetonitrile 615-71-4, 1,2,4-Triaminobenzene 2436-96-6 2716-10-1 3473-63-0, Formamidine acetate 27610-62-4 365564-05-2
RL: RCT (Reactant); RACT (Reactant or reagent)
(**electroluminescent** devices with good storage stability and brightness containing hetero compds. having multiple purine structures)

L54 ANSWER 30 OF 51 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2002:848337 HCAPLUS

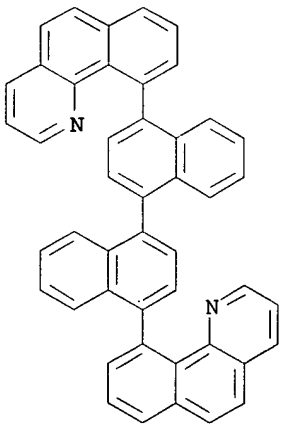
DOCUMENT NUMBER: 137:343728
TITLE: Organic **electroluminescent** element, luminescent light source, lighting device, display device and method
INVENTOR(S): Suzurizato, Yoshiyuki; Genta, Kazuo; Oshiyama, Tomohiro; Ueda, Noriko; Kita, Hiroshi
PATENT ASSIGNEE(S): Konica Co., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 42 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| JP 2002324676 | A2 | 20021108 | JP 2001-129284 | 2001 0426 |

PRIORITY APPLN. INFO.: JP 2001-129284 2001 0426

AB The invention refers to a **electroluminescent** component comprising an organic layer with a luminescent layer and a adjacent layer, wherein the maximum luminescent wavelength of each of the two layers is ≤ 415 nm, for a low energy, flexible, high-luminescence device.

IT **474304-10-4**
RL: DEV (Device component use); USES (Uses)
(**organic electroluminescent** element, **luminescent** light source, lighting device, display device and method)
RN 474304-10-4 HCAPLUS
CN Benzo[h]quinoline, 10,10'-[1,1'-binaphthalene]-4,4'-diylbis- (9CI) (CA INDEX NAME)



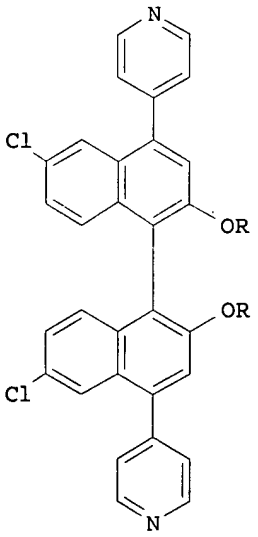

IC ICM H05B033-14
ICS C09K011-06; G09F009-30; H05B033-02; H05B033-12; H05B033-22
CC 73-11 (**Optical**, Electron, and Mass Spectroscopy and Other Related Properties)
ST **electroluminescent** device light source imaging device
IT **Electroluminescent** devices
Optical imaging devices
(**organic electroluminescent** element,

**luminescent** light source, lighting device, display device and method)

IT 2085-33-8, Aluminum tris(8-hydroxyquinolinato) 4733-39-5, 2,9-Dimethyl-4,7-Diphenyl 1,10-phenanthroline 12254-04-5, Aluminum barium magnesium oxide Al10BaMgO17 13778-49-9, Barium silicate Ba2SiO4 65181-79-5 124729-98-2, MTDATA 405171-87-1 405173-85-5 474304-09-1 **474304-10-4** 474304-11-5 474304-12-6, Germanium magnesium oxide (GeMg4O5.5)
RL: DEV (Device component use); USES (Uses)
(**organic electroluminescent** element, **luminescent** light source, lighting device, display device and method)

IT 16910-54-6, Europium 2+, uses 19768-33-3, Manganese 4+, uses
RL: DEV (Device component use); MOA (Modifier or additive use); USES (Uses)
(**organic electroluminescent** element, **luminescent** light source, lighting device, display device and method)

L54 ANSWER 31 OF 51 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2002:259503 HCAPLUS
DOCUMENT NUMBER: 136:410640
TITLE: A Chiral Molecular Square with Metallo-Corners for Enantioselective Sensing
AUTHOR(S): Lee, Suk Joong; Lin, Wenbin
CORPORATE SOURCE: Department of Chemistry, University of North Carolina, Chapel Hill, NC, 27599, USA
SOURCE: Journal of the American Chemical Society (2002), 124(17), 4554-4555
CODEN: JACSAT; ISSN: 0002-7863
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 136:410640
GI




I

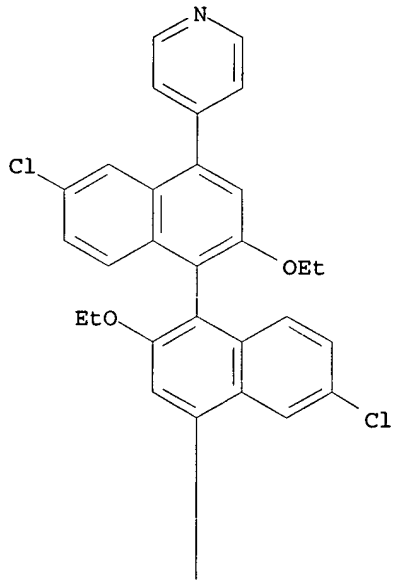
AB A family of chiral mol. squares based on fac-Re(CO)3Cl metallocorners and enantiopure atropisomeric bipyridine bridging ligands (I; R = Et, SiMe2tBu, CH2Ph, H), [Re(CO)3Cl(I)]4, were synthesized in high yields by refluxing ClRe(CO)5 and I in 1:1 molar ratio. These novel chiral metallocycles were characterized

by 1H and 13C{1H} NMR, UV-visible, luminescence, and CD spectroscopies, FAB mass spectrometry, and microanal. Mol. square [Re(CO)3Cl(I)]4 (R = H) 4 which contains four 1,1'-bi-2-naphthol functionalities exhibits interesting enantioselective luminescence quenching by 2-amino-1-propanol. This research illustrates the potential of generating novel functional materials based on supramol. chemical

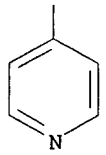
IT **431043-34-4P 431043-35-5P 431043-36-6P 431043-37-7P 431043-38-8P 431043-39-9P 431043-40-2P 431043-41-3P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and complexation with rhenium)

RN 431043-34-4 HCAPLUS
CN Pyridine, 4,4'-[(1R)-6,6'-dichloro-2,2'-diethoxy[1,1'-binaphthalene]-4,4'-diyl]bis- (9CI) (CA INDEX NAME)

PAGE 1-A

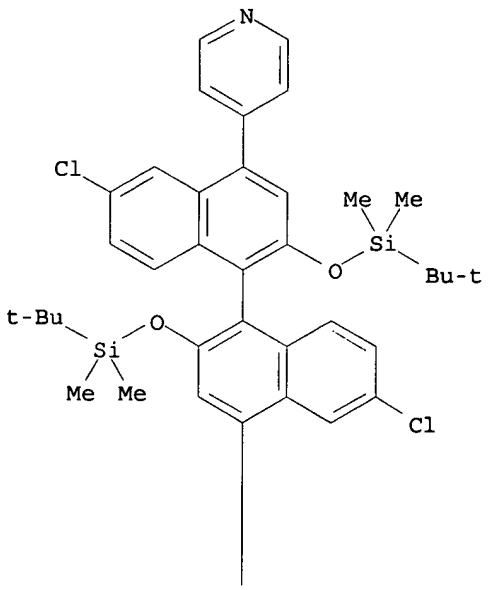



PAGE 2-A

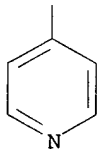



RN 431043-35-5 HCAPLUS
CN Pyridine, 4,4'-[(1R)-6,6'-dichloro-2,2'-bis[[(1,1-dimethylethyl)dimethylsilyl]oxy][1,1'-binaphthalene]-4,4'-diyl]bis- (9CI) (CA INDEX NAME)

PAGE 1-A

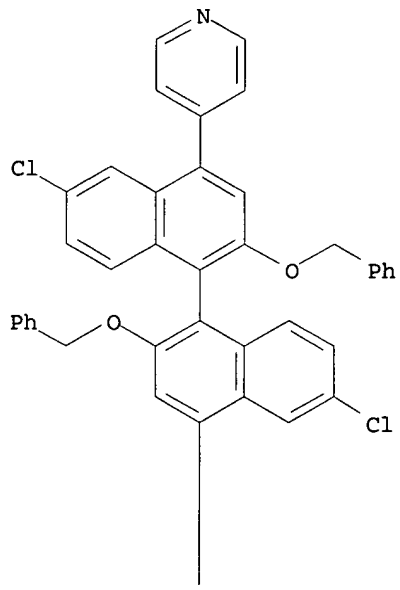



PAGE 2-A

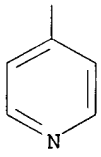



RN 431043-36-6 HCAPLUS
CN Pyridine, 4,4'-[(1R)-6,6'-dichloro-2,2'-bis(phenylmethoxy)[1,1'-binaphthalene]-4,4'-diyl]bis- (9CI) (CA INDEX NAME)

PAGE 1-A

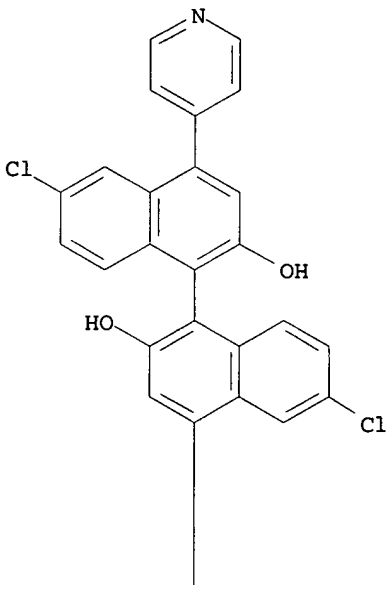



PAGE 2-A

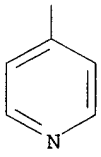



RN 431043-37-7 HCAPLUS
CN [1,1'-Binaphthalene]-2,2'-diol, 6,6'-dichloro-4,4'-di-4-pyridinyl-, (1R)- (9CI) (CA INDEX NAME)

PAGE 1-A

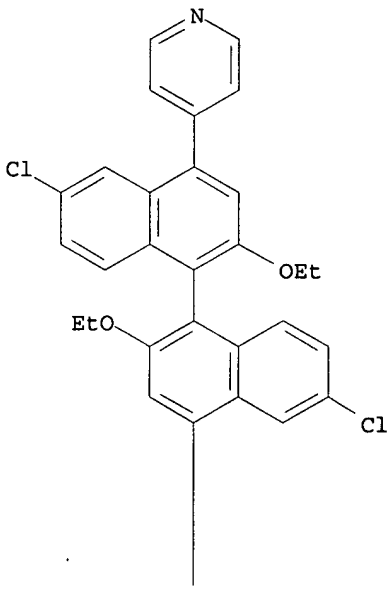



PAGE 2-A

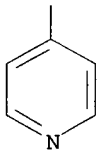



RN 431043-38-8 HCAPLUS
CN Pyridine, 4,4'-[(1S)-6,6'-dichloro-2,2'-diethoxy[1,1'-binaphthalene]-4,4'-diyl]bis- (9CI) (CA INDEX NAME)

PAGE 1-A

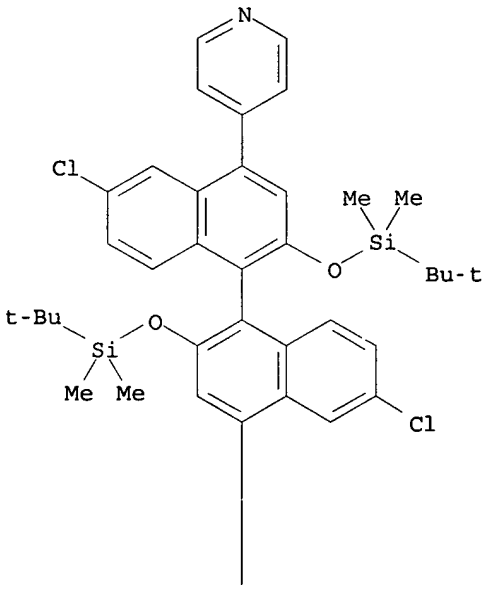



PAGE 2-A

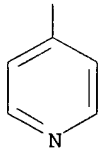



RN 431043-39-9 HCAPLUS
CN Pyridine, 4,4'-[(1S)-6,6'-dichloro-2,2'-bis[[(1,1-dimethylethyl)dimethylsilyl]oxy][1,1'-binaphthalene]-4,4'-diyl]bis- (9CI) (CA INDEX NAME)

PAGE 1-A

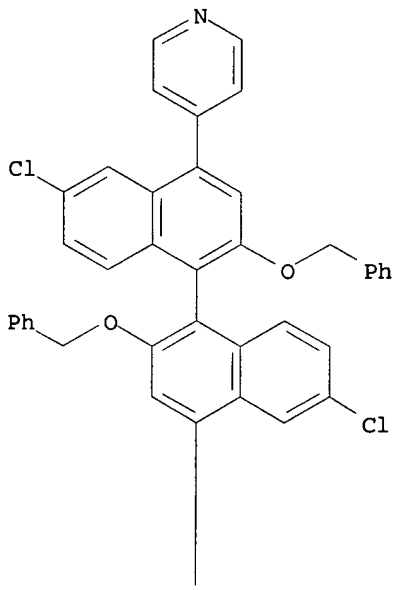



PAGE 2-A

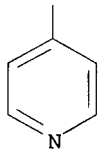



RN 431043-40-2 HCAPLUS
CN Pyridine, 4,4'-[(1S)-6,6'-dichloro-2,2'-bis(phenylmethoxy)[1,1'-binaphthalene]-4,4'-diyl]bis- (9CI) (CA INDEX NAME)

PAGE 1-A

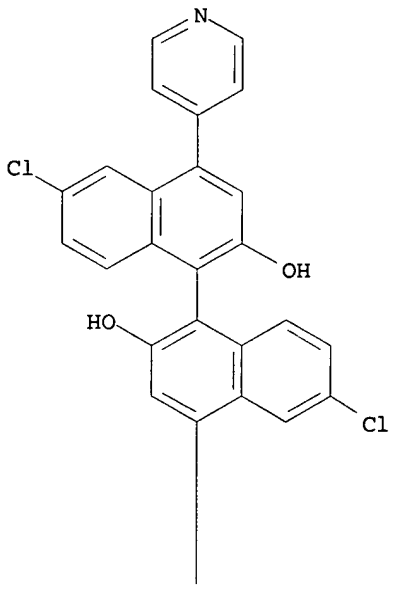



PAGE 2-A

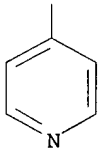



RN 431043-41-3 HCAPLUS
CN [1,1'-Binaphthalene]-2,2'-diol, 6,6'-dichloro-4,4'-di-4-pyridinyl-, (1S)- (9CI) (CA INDEX NAME)

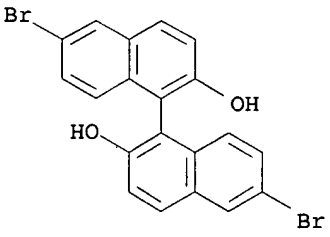
PAGE 1-A



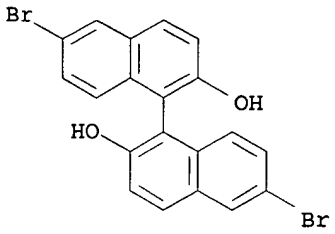

PAGE 2-A



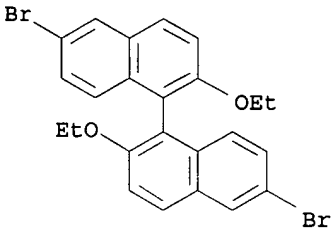

IT **65283-60-5P 80655-81-8P 180135-88-0P**
**264149-61-3P 431043-50-4P 431043-53-7P**
**431043-56-0P 431043-59-3P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and reactant for preparation of rhenium carbonyl dipyridylbinaphthol derivative tetranuclear complexes)
RN 65283-60-5 HCAPLUS
CN [1,1'-Binaphthalene]-2,2'-diol, 6,6'-dibromo-, (1R)- (9CI) (CA INDEX NAME)



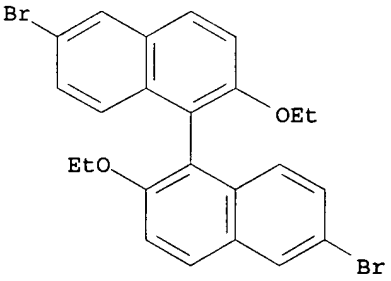

RN 80655-81-8 HCAPLUS
CN [1,1'-Binaphthalene]-2,2'-diol, 6,6'-dibromo-, (1S)- (9CI) (CA INDEX NAME)



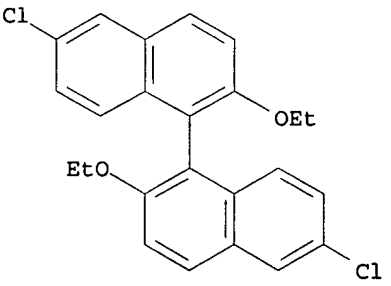

RN 180135-88-0 HCAPLUS
CN 1,1'-Binaphthalene, 6,6'-dibromo-2,2'-diethoxy-, (1S)- (9CI) (CA INDEX NAME)




RN 264149-61-3 HCAPLUS
CN 1,1'-Binaphthalene, 6,6'-dibromo-2,2'-diethoxy-, (1R)- (9CI) (CA INDEX NAME)

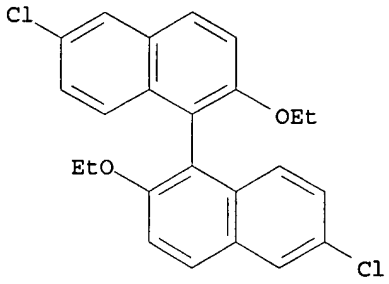



RN 431043-50-4 HCAPLUS
CN 1,1'-Binaphthalene, 6,6'-dichloro-2,2'-diethoxy-, (1R)- (9CI) (CA INDEX NAME)

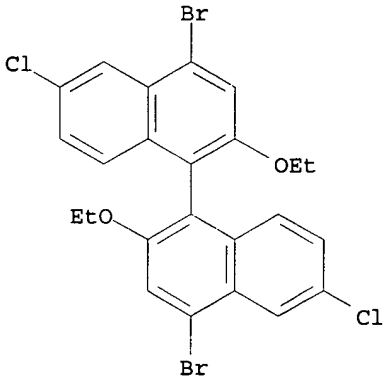



RN 431043-53-7 HCAPLUS
CN 1,1'-Binaphthalene, 6,6'-dichloro-2,2'-diethoxy-, (1S)- (9CI) (CA

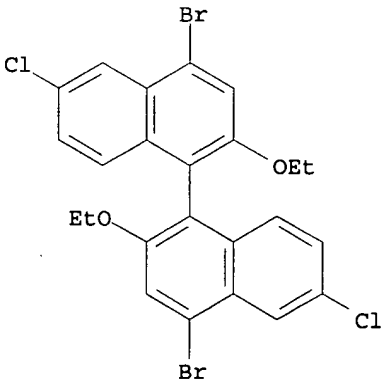
INDEX NAME)




RN 431043-56-0 HCAPLUS
CN 1,1'-Binaphthalene, 4,4'-dibromo-6,6'-dichloro-2,2'-diethoxy-, (1R)- (9CI) (CA INDEX NAME)

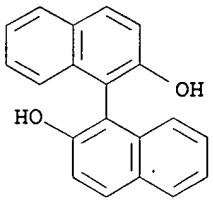



RN 431043-59-3 HCAPLUS
CN 1,1'-Binaphthalene, 4,4'-dibromo-6,6'-dichloro-2,2'-diethoxy-, (1S)- (9CI) (CA INDEX NAME)

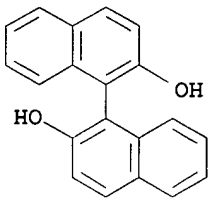



IT **18531-94-7 18531-99-2 431043-61-7**
**431043-64-0 431043-67-3 431043-69-5**
RL: RCT (Reactant); RACT (Reactant or reagent)
(reactant for preparation of rhenium carbonyl dipyridylbinaphthol derivative tetranuclear complexes)
RN 18531-94-7 HCAPLUS

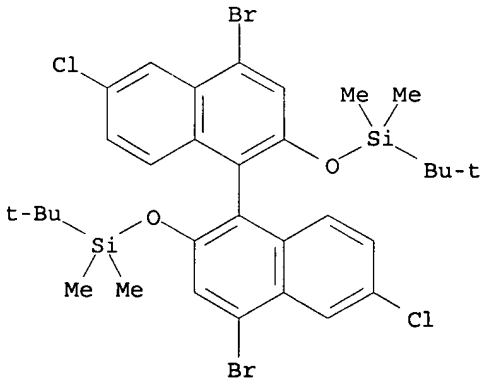
CN [1,1'-Binaphthalene]-2,2'-diol, (1R)- (9CI) (CA INDEX NAME)



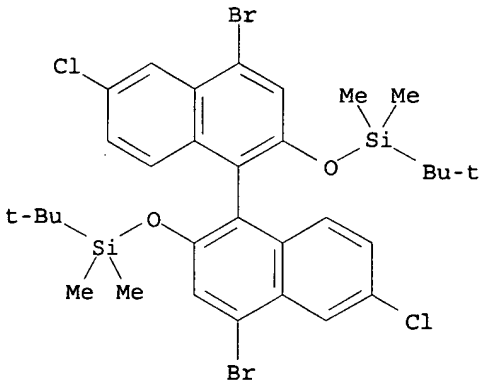

RN 18531-99-2 HCAPLUS
CN [1,1'-Binaphthalene]-2,2'-diol, (1S)- (9CI) (CA INDEX NAME)



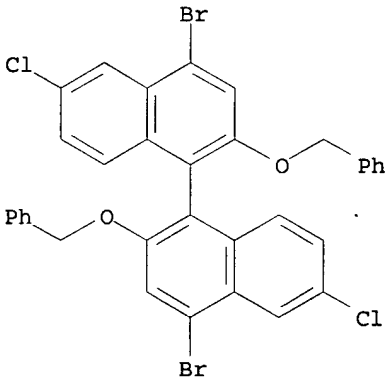

RN 431043-61-7 HCAPLUS
CN Silane, [[(1R)-4,4'-dibromo-6,6'-dichloro[1,1'-binaphthalene]-2,2'-diyl]bis(oxy)]bis[(1,1-dimethylethyl)dimethyl- (9CI) (CA INDEX NAME)



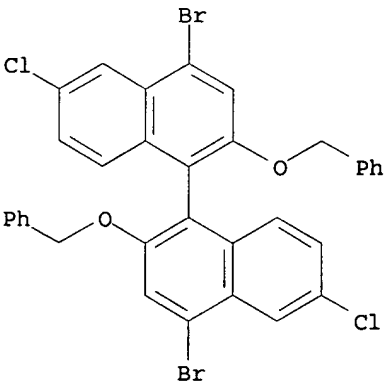

RN 431043-64-0 HCAPLUS
CN Silane, [[(1S)-4,4'-dibromo-6,6'-dichloro[1,1'-binaphthalene]-2,2'-diyl]bis(oxy)]bis[(1,1-dimethylethyl)dimethyl- (9CI) (CA INDEX NAME)



RN 431043-67-3 HCAPLUS
CN 1,1'-Binaphthalene, 4,4'-dibromo-6,6'-dichloro-2,2'-bis(phenylmethoxy)-, (1R)- (9CI) (CA INDEX NAME)



RN 431043-69-5 HCAPLUS
CN 1,1'-Binaphthalene, 4,4'-dibromo-6,6'-dichloro-2,2'-bis(phenylmethoxy)-, (1S)- (9CI) (CA INDEX NAME)



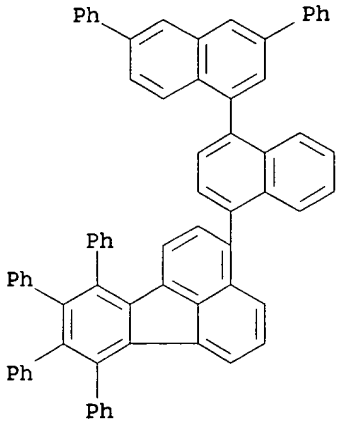
CC 78-7 (Inorganic Chemicals and Reactions)
Section cross-reference(s): 27, 73
IT **431043-34-4P 431043-35-5P 431043-36-6P**
**431043-37-7P 431043-38-8P 431043-39-9P**

**431043-40-2P 431043-41-3P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and complexation with rhenium)
IT **65283-60-5P 80655-81-8P 180135-88-0P**
**264149-61-3P 431043-50-4P 431043-53-7P**
**431043-56-0P 431043-59-3P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and reactant for preparation of rhenium carbonyl dipyridylbinaphthol derivative tetranuclear complexes)
IT 74-96-4, Ethyl bromide 14099-01-5, Pentacarbonylchlororhenium
**18531-94-7 18531-99-2** 59020-06-3,
4-Pyridyltrimethylstannane **431043-61-7**
**431043-64-0 431043-67-3 431043-69-5**
RL: RCT (Reactant); RACT (Reactant or reagent)
(reactant for preparation of rhenium carbonyl dipyridylbinaphthol derivative tetranuclear complexes)
REFERENCE COUNT: 30 THERE ARE 30 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

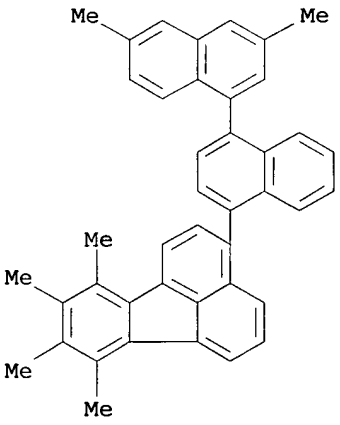
L54 ANSWER 32 OF 51 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2002:238119 HCAPLUS
DOCUMENT NUMBER: 136:286301
TITLE: Dibenzofluorenopentaphene derivatives and organic **electroluminescent** devices using them
INVENTOR(S): Ishida, Tsutomu; Shimamura, Takehiko; Nakatsuka, Masakatsu
PATENT ASSIGNEE(S): Mitsui Chemicals Inc., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 47 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| JP 2002093580 | A2 | 20020329 | JP 2000-221974 | 2000 0724 |
| PRIORITY APPLN. INFO.: | | | JP 2000-209225 A | 2000 0711 |

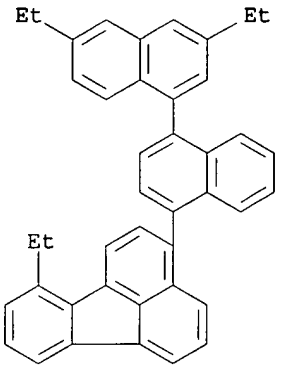
OTHER SOURCE(S): MARPAT 136:286301
AB The invention relates to an organic **electroluminescent** device comprising a pair of **electrodes** sandwiching ≥1 layer(s) containing ≥1 dibenzo[kl,rst] fluoreno[9,1,2-cde]pentaphene derivs.
IT **405508-28-3**
RL: RCT (Reactant); RACT (Reactant or reagent)
(3novel dibenzofluorenopentaphene derivs. for organic **electroluminescent** devices)
RN 405508-28-3 HCAPLUS
CN Fluoranthene, 3-(3',6'-diphenyl[1,1'-binaphthalen]-4-yl)-7,8,9,10-tetraphenyl- (9CI) (CA INDEX NAME)



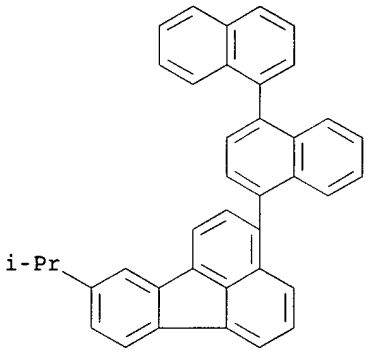

IT **405508-05-6**
RL: RCT (Reactant); RACT (Reactant or reagent)
(9novel dibenzofluorenopentaphene derivs. for organic **electroluminescent** devices)
RN 405508-05-6 HCAPLUS
CN Fluoranthene, 3-(3',6'-dimethyl[1,1'-binaphthalen]-4-yl)-7,8,9,10-tetramethyl- (9CI) (CA INDEX NAME)



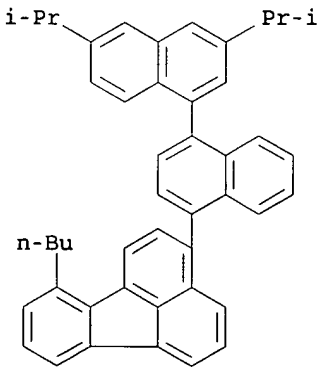

IT **405507-97-3 405507-99-5 405508-01-2**
**405508-03-4 405508-04-5 405508-06-7**
**405508-07-8 405508-08-9 405508-09-0**
**405508-10-3 405508-11-4 405508-12-5**
**405508-13-6 405508-14-7 405508-15-8**
**405508-16-9 405508-17-0 405508-18-1**
**405508-19-2 405508-20-5 405508-21-6**
**405508-22-7 405508-23-8 405508-24-9**
**405508-25-0 405508-26-1 405508-27-2**
**405508-29-4 405508-30-7 405508-31-8**
RL: RCT (Reactant); RACT (Reactant or reagent)
(novel dibenzofluorenopentaphene derivs. for organic **electroluminescent** devices)
RN 405507-97-3 HCAPLUS
CN Fluoranthene, 3-(3',6'-diethyl[1,1'-binaphthalen]-4-yl)-10-ethyl- (9CI) (CA INDEX NAME)



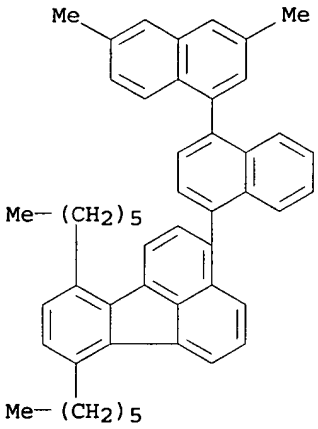

RN 405507-99-5 HCAPLUS
CN Fluoranthene, 3-[1,1'-binaphthalen]-4-yl-9-(1-methylethyl)- (9CI) (CA INDEX NAME)



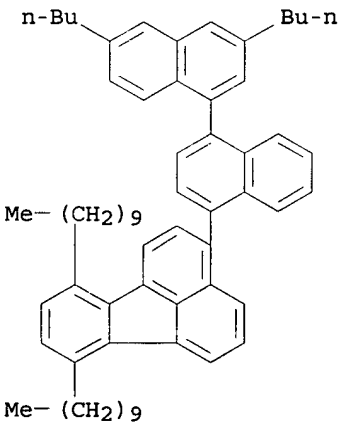

RN 405508-01-2 HCAPLUS
CN Fluoranthene, 3-[3',6'-bis(1-methylethyl)[1,1'-binaphthalen]-4-yl]-10-butyl- (9CI) (CA INDEX NAME)



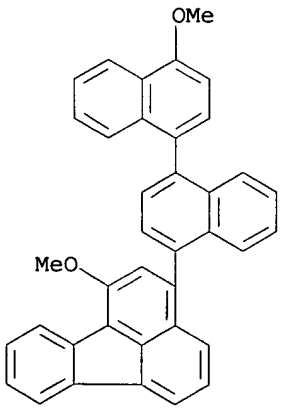

RN 405508-03-4 HCAPLUS
CN Fluoranthene, 3-(3',6'-dimethyl[1,1'-binaphthalen]-4-yl)-7,10-dihexyl- (9CI) (CA INDEX NAME)



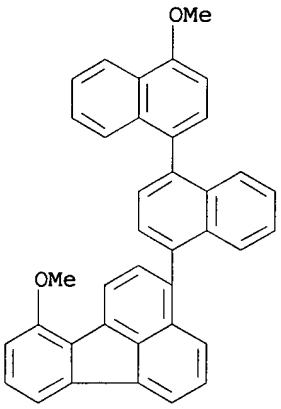

RN 405508-04-5 HCAPLUS
CN Fluoranthene, 7,10-didecyl-3-(3',6'-dibutyl[1,1'-binaphthalen]-4-yl)- (9CI) (CA INDEX NAME)



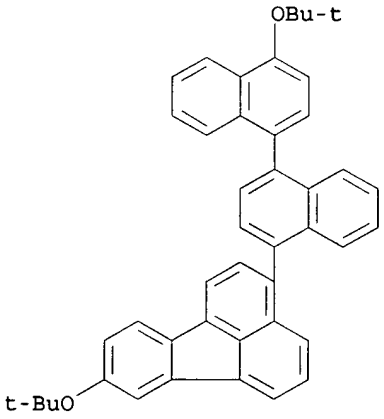

RN 405508-06-7 HCAPLUS
CN Fluoranthene, 1-methoxy-3-(4'-methoxy[1,1'-binaphthalen]-4-yl)- (9CI) (CA INDEX NAME)



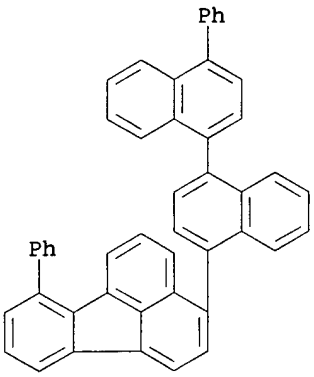
RN 405508-07-8 HCAPLUS
CN Fluoranthene, 10-methoxy-3-(4'-methoxy[1,1'-binaphthalen]-4-yl)-
(9CI) (CA INDEX NAME)



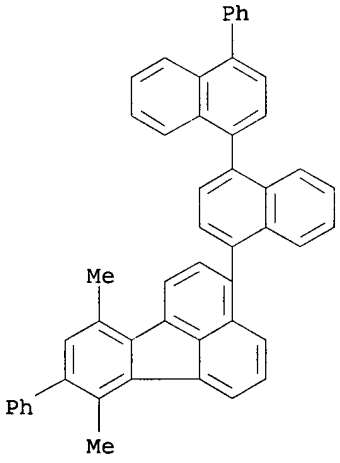

RN 405508-08-9 HCAPLUS
CN Fluoranthene, 8-(1,1-dimethylethoxy)-3-[4'-(1,1-
dimethylethoxy)[1,1'-binaphthalen]-4-yl]- (9CI) (CA INDEX NAME)



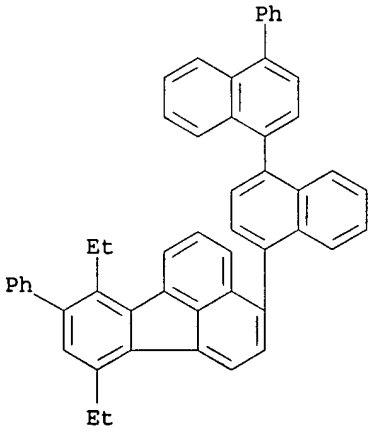

RN 405508-09-0 HCAPLUS
CN Fluoranthene, 7-phenyl-3-(4'-phenyl[1,1'-binaphthalen]-4-yl)-
(9CI) (CA INDEX NAME)



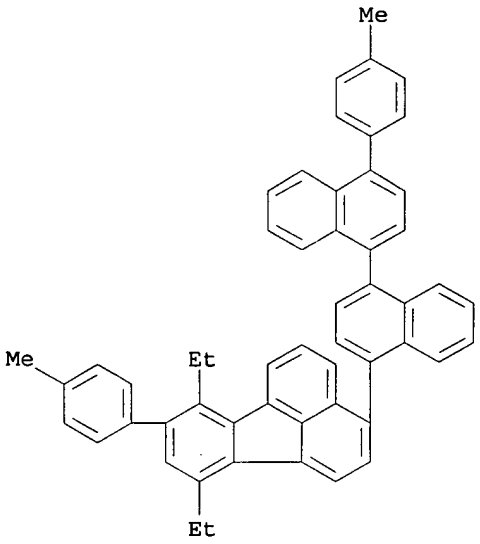

RN 405508-10-3 HCAPLUS
CN Fluoranthene, 7,10-dimethyl-8-phenyl-3-(4'-phenyl[1,1'-binaphthalen]-4-yl)- (9CI) (CA INDEX NAME)



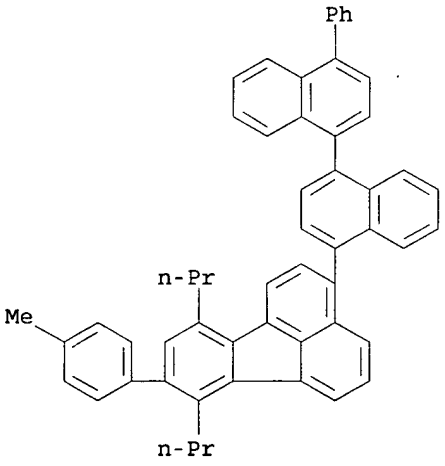

RN 405508-11-4 HCAPLUS
CN Fluoranthene, 7,10-diethyl-8-phenyl-3-(4'-phenyl[1,1'-binaphthalen]-4-yl)- (9CI) (CA INDEX NAME)



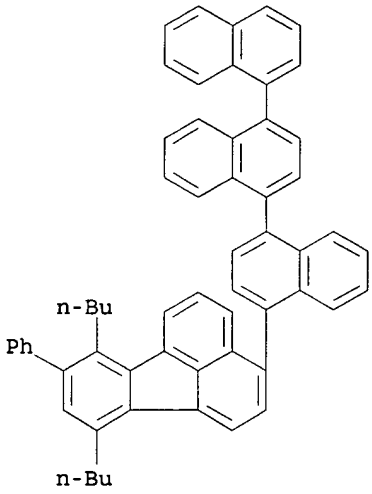
RN 405508-12-5 HCAPLUS
CN Fluoranthene, 7,10-diethyl-8-(4-methylphenyl)-3-[4'-(4-methylphenyl)[1,1'-binaphthalen]-4-yl]- (9CI) (CA INDEX NAME)



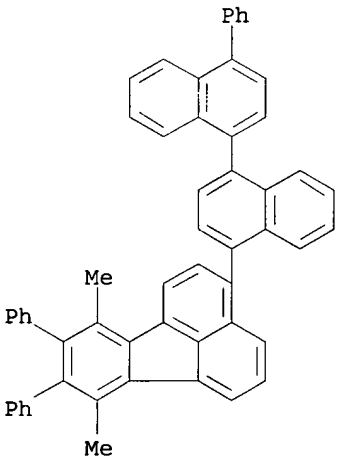

RN 405508-13-6 HCAPLUS
CN Fluoranthene, 8-(4-methylphenyl)-3-(4'-phenyl[1,1'-binaphthalen]-4-yl)-7,10-dipropyl- (9CI) (CA INDEX NAME)



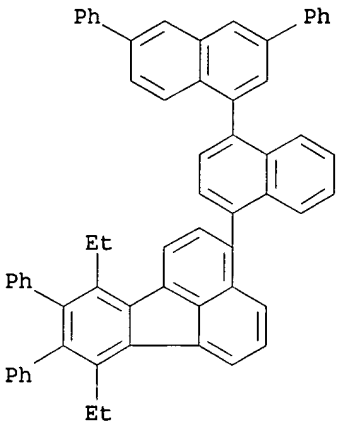

RN 405508-14-7 HCAPLUS
CN Fluoranthene, 7,10-dibutyl-8-phenyl-3-[1,1':4',1''-ternaphthalen]-4-yl- (9CI) (CA INDEX NAME)



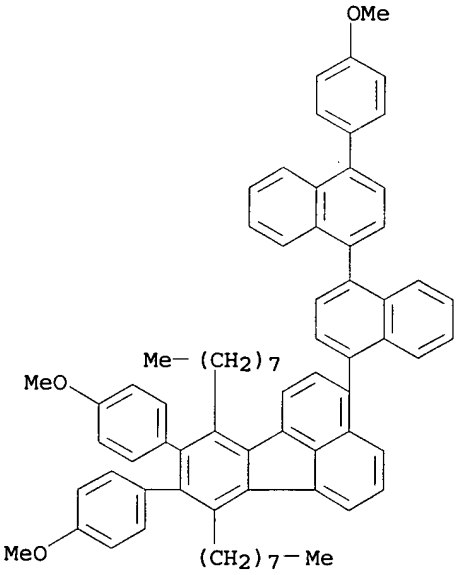

RN 405508-15-8 HCAPLUS
CN Fluoranthene, 7,10-dimethyl-8,9-diphenyl-3-(4'-phenyl[1,1'-binaphthalen]-4-yl)- (9CI) (CA INDEX NAME)



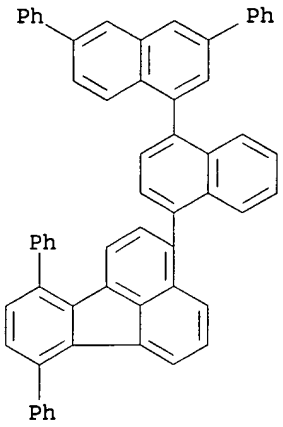

RN 405508-16-9 HCAPLUS
CN Fluoranthene, 3-(3',6'-diphenyl[1,1'-binaphthalen]-4-yl)-7,10-diethyl-8,9-diphenyl- (9CI) (CA INDEX NAME)



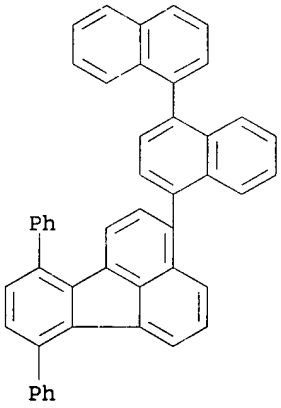

RN 405508-17-0 HCAPLUS
CN Fluoranthene, 8,9-bis(4-methoxyphenyl)-3-[4'-(4-methoxyphenyl)[1,1'-binaphthalen]-4-yl]-7,10-dioctyl- (9CI) (CA INDEX NAME)



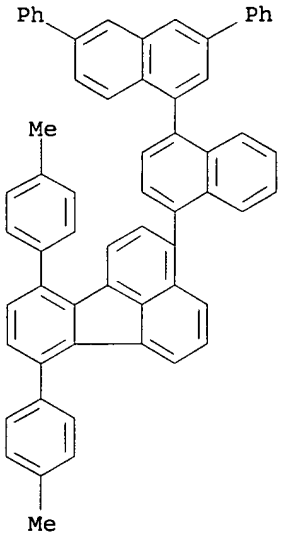

RN 405508-18-1 HCAPLUS
CN Fluoranthene, 3-(3',6'-diphenyl[1,1'-binaphthalen]-4-yl)-7,10-diphenyl- (9CI) (CA INDEX NAME)



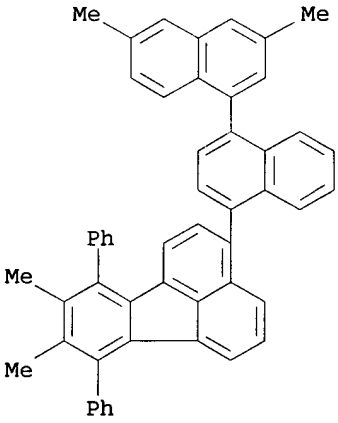

RN 405508-19-2 HCAPLUS
CN Fluoranthene, 3-[1,1'-binaphthalen]-4-yl-7,10-diphenyl- (9CI) (CA INDEX NAME)



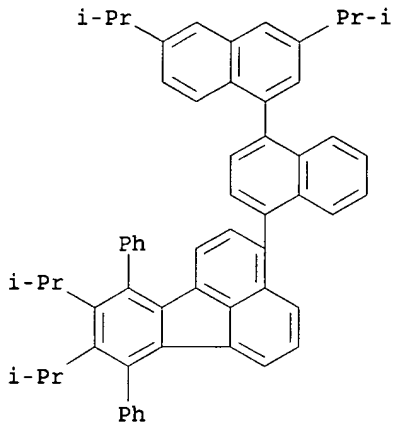

RN 405508-20-5 HCAPLUS
CN Fluoranthene, 3-(3',6'-diphenyl[1,1'-binaphthalen]-4-yl)-7,10-bis(4-methylphenyl)- (9CI) (CA INDEX NAME)



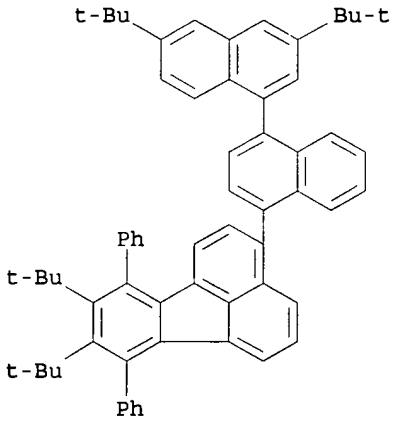

RN 405508-21-6 HCAPLUS
CN Fluoranthene, 3-(3',6'-dimethyl[1,1'-binaphthalen]-4-yl)-8,9-dimethyl-7,10-diphenyl- (9CI) (CA INDEX NAME)



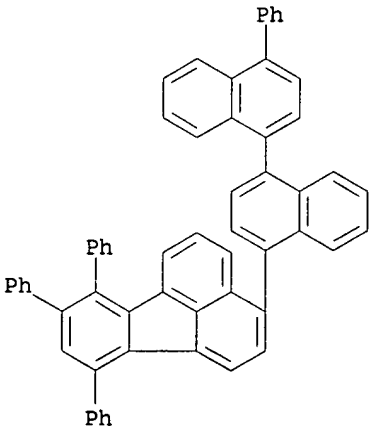

RN 405508-22-7 HCAPLUS
CN Fluoranthene, 3-[3',6'-bis(1-methylethyl)[1,1'-binaphthalen]-4-yl]-8,9-bis(1-methylethyl)-7,10-diphenyl- (9CI) (CA INDEX NAME)



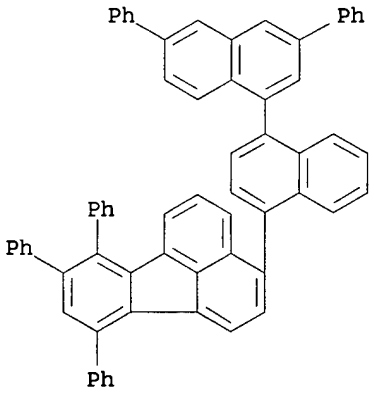

RN 405508-23-8 HCAPLUS
CN Fluoranthene, 3-[3',6'-bis(1,1-dimethylethyl)[1,1'-binaphthalen]-4-yl]-8,9-bis(1,1-dimethylethyl)-7,10-diphenyl- (9CI) (CA INDEX NAME)




RN 405508-24-9 HCAPLUS
CN Fluoranthene, 7,8,10-triphenyl-3-(4'-phenyl[1,1'-binaphthalen]-4-yl)- (9CI) (CA INDEX NAME)

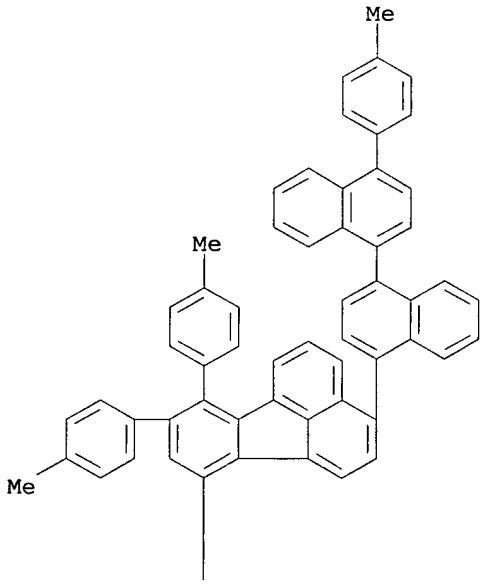


RN 405508-25-0 HCAPLUS
CN Fluoranthene, 3-(3',6'-diphenyl[1,1'-binaphthalen]-4-yl)-7,8,10-triphenyl- (9CI) (CA INDEX NAME)

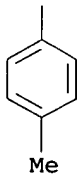



RN 405508-26-1 HCAPLUS
CN Fluoranthene, 7,8,10-tris(4-methylphenyl)-3-[4'-(4-methylphenyl)[1,1'-binaphthalen]-4-yl]- (9CI) (CA INDEX NAME)

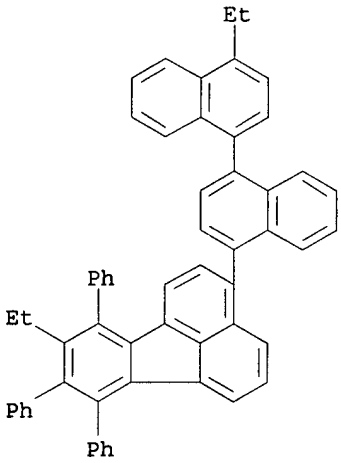
PAGE 1-A



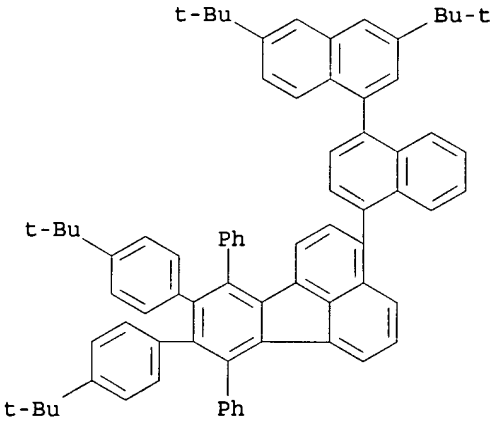

PAGE 2-A



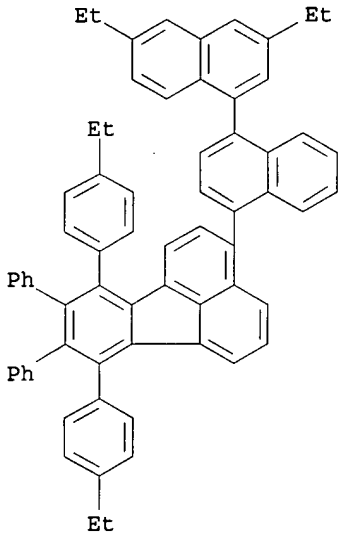
RN 405508-27-2 HCAPLUS
CN Fluoranthene, 9-ethyl-3-(4'-ethyl[1,1'-binaphthalen]-4-yl)-7,8,10-triphenyl- (9CI) (CA INDEX NAME)



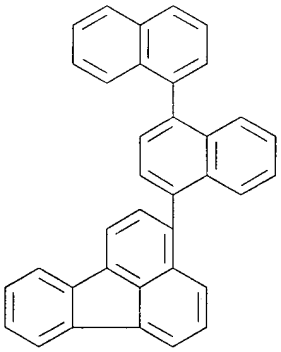

RN 405508-29-4 HCAPLUS
CN Fluoranthene, 3-[3',6'-bis(1,1-dimethylethyl)[1,1'-binaphthalen]-4-yl]-8,9-bis[4-(1,1-dimethylethyl)phenyl]-7,10-diphenyl- (9CI) (CA INDEX NAME)




RN 405508-30-7 HCAPLUS
CN Fluoranthene, 3-(3',6'-diethyl[1,1'-binaphthalen]-4-yl)-7,10-bis(4-ethylphenyl)-8,9-diphenyl- (9CI) (CA INDEX NAME)




RN 405508-31-8 HCAPLUS
CN Fluoranthene, 3-[1,1'-binaphthalen]-4-yl- (9CI) (CA INDEX NAME)



IC ICM H05B033-14
ICS C07C013-62; C07C025-22; C07C043-21; C09K011-06
CC 73-11 (**Optical**, Electron, and Mass Spectroscopy and Other Related Properties)
Section cross-reference(s): 25
ST Dibenzofluorenopentaphene deriv **electroluminescent** device
IT **Electroluminescent** devices
(novel dibenzofluorenopentaphene derivs. for)
IT Fluorescent substances
(novel dibenzofluorenopentaphene derivs. for organic **electroluminescent** devices)
IT Polycarbonates, uses
RL: DEV (Device component use); USES (Uses)
(novel dibenzofluorenopentaphene derivs. for organic **electroluminescent** devices)
IT Hydrocarbons, uses
RL: DEV (Device component use); RCT (Reactant); RACT (Reactant or reagent); USES (Uses)
(novel dibenzofluorenopentaphene derivs. for organic **electroluminescent** devices)
IT **405508-28-3**

RL: RCT (Reactant); RACT (Reactant or reagent)
(3novel dibenzofluorenopentaphene derivs. for organic **electroluminescent** devices)

IT **405508-05-6**
RL: RCT (Reactant); RACT (Reactant or reagent)
(9novel dibenzofluorenopentaphene derivs. for organic **electroluminescent** devices)

IT 1450-63-1
RL: DEV (Device component use); USES (Uses)
(blue **light-emitting** component; novel dibenzofluorenopentaphene derivs. for organic **electroluminescent** devices)

IT 2085-33-8
RL: DEV (Device component use); USES (Uses)
(electron injection/transport layer; novel dibenzofluorenopentaphene derivs. for organic **electroluminescent** devices)

IT 38215-36-0
RL: DEV (Device component use); USES (Uses)
(green **light-emitting** component; novel dibenzofluorenopentaphene derivs. for organic **electroluminescent** devices)

IT 65181-78-4
RL: DEV (Device component use); USES (Uses)
(hole injection/transport layer; novel dibenzofluorenopentaphene derivs. for organic **electroluminescent** devices)

IT 146162-48-3 146162-54-1
RL: DEV (Device component use); USES (Uses)
(**light-emitting** layer containing; novel dibenzofluorenopentaphene derivs. for organic **electroluminescent** devices)

IT 25067-59-8 124729-98-2 138372-67-5 150405-69-9 405507-55-3
405507-56-4 405507-57-5 405507-58-6 405507-59-7
405507-60-0 405507-61-1 405507-62-2 405507-63-3
405507-64-4 405507-65-5 405507-66-6 405507-67-7
405507-68-8 405507-69-9 405507-70-2 405507-71-3
405507-72-4 405507-73-5 405507-74-6 405507-75-7
405507-76-8 405507-77-9 405507-79-1 405507-81-5
405507-83-7 405507-85-9 405507-87-1 405507-89-3
405507-91-7 405507-93-9 405507-95-1
RL: DEV (Device component use); USES (Uses)
(novel dibenzofluorenopentaphene derivs. for organic **electroluminescent** devices)

IT **405507-97-3 405507-99-5 405508-01-2**
**405508-03-4 405508-04-5 405508-06-7**
**405508-07-8 405508-08-9 405508-09-0**
**405508-10-3 405508-11-4 405508-12-5**
**405508-13-6 405508-14-7 405508-15-8**
**405508-16-9 405508-17-0 405508-18-1**
**405508-19-2 405508-20-5 405508-21-6**
**405508-22-7 405508-23-8 405508-24-9**
**405508-25-0 405508-26-1 405508-27-2**
**405508-29-4 405508-30-7 405508-31-8**
RL: RCT (Reactant); RACT (Reactant or reagent)
(novel dibenzofluorenopentaphene derivs. for organic **electroluminescent** devices)

L54 ANSWER 33 OF 51 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2002:156067 HCAPLUS
DOCUMENT NUMBER: 136:341105
TITLE: Asymmetric Oxidative Coupling Polymerization of Optically Active Tetrahydroxybinaphthalene Derivative
AUTHOR(S): Habaue, Shigeki; Seko, Tomoaki; Okamoto, Yoshio

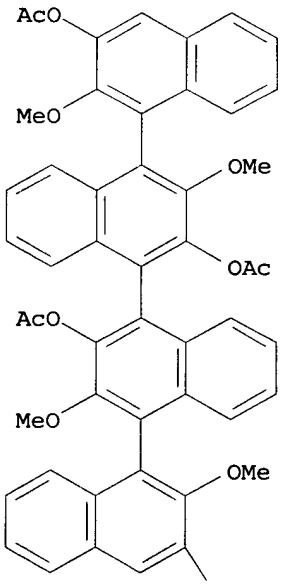
CORPORATE SOURCE: Graduate School of Engineering, Department of Applied Chemistry, Nagoya University, Furo-cho, Chikusa-ku, Nagoya, 464-8603, Japan
SOURCE: Macromolecules (2002), 35(7), 2437-2439
CODEN: MAMOBX; ISSN: 0024-9297
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Poly(1,1'-bi-2-naphthol) derivs., in which the naphthalene units are connected at their 1,4-positions, with a high stereoregularity were synthesized by the asym. oxidative coupling polymerization of (R)-/(S)-3,3'-dihydroxy-2,2'-dimethoxy-1,1'-binaphthalene with chiral Cu reagents (i.e., CuCl/(S)-(+)-1-(2-pyrrolidinylmethyl)pyrrolidine or CuCl2/(-)-sparteine complexes).

IT **416841-29-7 416841-30-0 416841-31-1**
RL: PRP (Properties)
(model compds.; preparation and properties of poly(binaphthol) made by asym. oxidative coupling polymerization of tetrahydroxybinaphthalene)

RN 416841-29-7 HCAPLUS
CN [1,1':4',1'':4'',1'''-Quaternaphthalene]-2'',3,3',3'''-tetrol, 2,2',2''',3''-tetramethoxy-, tetraacetate, (1S,1''S,1'''S)- (9CI) (CA INDEX NAME)

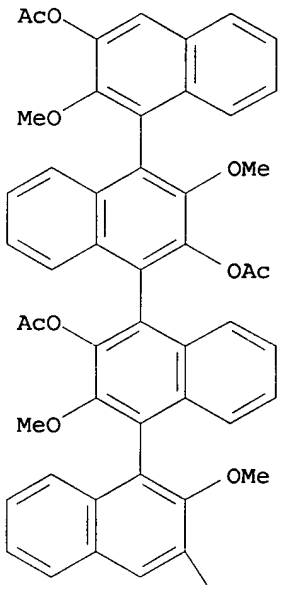
PAGE 1-A




PAGE 2-A


RN 416841-30-0 HCAPLUS
CN [1,1':4',1'':4'',1'''-Quaternaphthalene]-2'',3,3',3'''-tetrol, 2,2',2''',3''-tetramethoxy-, tetraacetate, (1S,1''R,1'''S)- (9CI) (CA INDEX NAME)

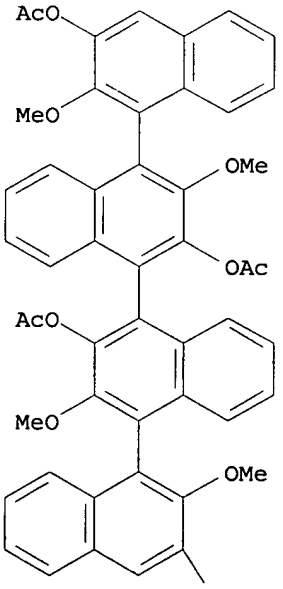
PAGE 1-A




PAGE 2-A


RN 416841-31-1 HCAPLUS
CN [1,1':4',1'':4'',1'''-Quaternaphthalene]-2'',3,3',3'''-tetrol, 2,2',2''',3''-tetramethoxy-, tetraacetate, (1R,1''R,1'''S)- (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 2-A

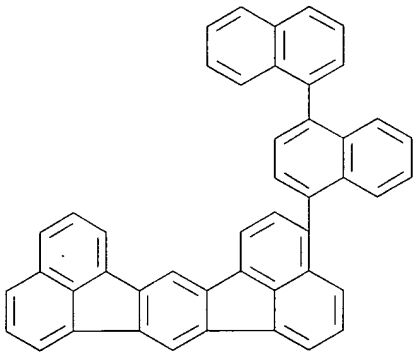

CC 35-7 (Chemistry of Synthetic High Polymers)
IT **416841-29-7 416841-30-0 416841-31-1**
RL: PRP (Properties)
(model compds.; preparation and properties of poly(binaphthol) made by asym. oxidative coupling polymerization of tetrahydroxybinaphthalene)
REFERENCE COUNT: 27 THERE ARE 27 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L54 ANSWER 34 OF 51 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2002:139110 HCAPLUS
DOCUMENT NUMBER: 136:175292
TITLE: Dibenzo[kl,rst]acenaphtho[1',2':6,7]fluoreno[9,1,2-cde]pentaphene derivatives and organic **electroluminescent** devices using them
INVENTOR(S): Ishida, Tsutomu; Shimamura, Takehiko; Totani, Yoshiyuki; Nakatsuka, Masakatsu
PATENT ASSIGNEE(S): Mitsui Chemicals Inc., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 51 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

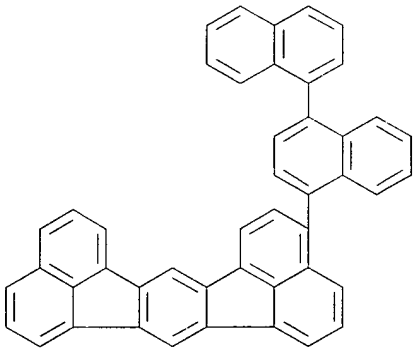
| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| JP 2002056979 | A2 | 20020222 | JP 2000-242475 | 2000 0810 |
| PRIORITY APPLN. INFO.: | | | JP 2000-242475 | 2000 0810 |

OTHER SOURCE(S): MARPAT 136:175292
AB The invention relates to an organic **electroluminescent** device comprising a pair of **electrodes** sandwiching ≥1 layer(s) containing ≥1 dibenzo[kl,rst]acenaphtho[1',2':6,7]fluoreno[9,1,2-cde]pentaphene derivs..
IT **390761-74-7 390761-74-7D**, derivs.
**390762-17-1 396099-75-5 396099-76-6**
**396099-77-7 396099-78-8 396099-79-9**
**396099-80-2 396099-81-3 396099-82-4**
**396099-83-5 396099-84-6 396099-85-7**
**396099-86-8 396099-87-9 396099-88-0**
**396099-89-1 396099-90-4 396099-92-6**
**396099-93-7 396099-94-8 396099-95-9**
**396099-96-0 396099-97-1 396099-98-2**
**396099-99-3 396100-00-8 396100-01-9**
**396100-02-0 396100-03-1 396100-04-2**
**396100-05-3 396100-06-4 396100-07-5**
**396100-08-6 396100-09-7 396100-10-0**
RL: RCT (Reactant); RACT (Reactant or reagent)
(novel dibenzoacenaphthofluorenopentaphene derivs. for organic **electroluminescent** devices)

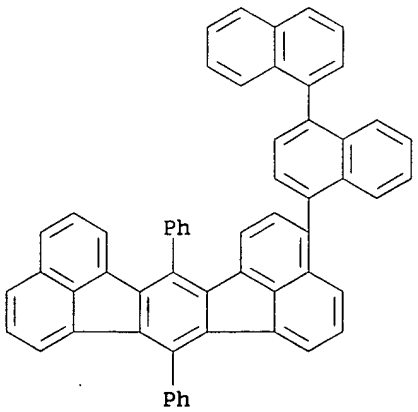
RN 390761-74-7 HCAPLUS
CN Acenaphtho[1,2-k]fluoranthene, 3-[1,1'-binaphthalen]-4-yl- (9CI) (CA INDEX NAME)



RN 390761-74-7 HCAPLUS
CN Acenaphtho[1,2-k]fluoranthene, 3-[1,1'-binaphthalen]-4-yl- (9CI) (CA INDEX NAME)

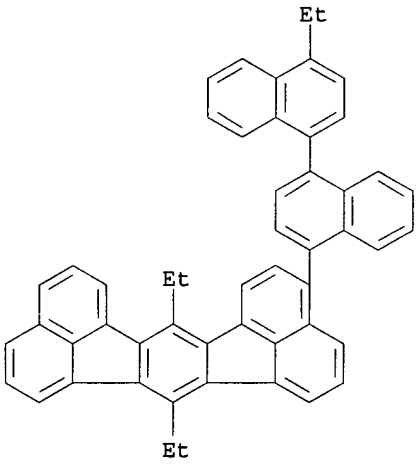


RN 390762-17-1 HCAPLUS
CN Acenaphtho[1,2-k]fluoranthene, 3-[1,1'-binaphthalen]-4-yl-7,14-diphenyl- (9CI) (CA INDEX NAME)

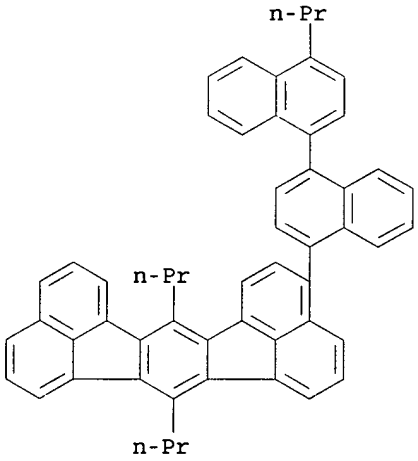



RN 396099-75-5 HCAPLUS

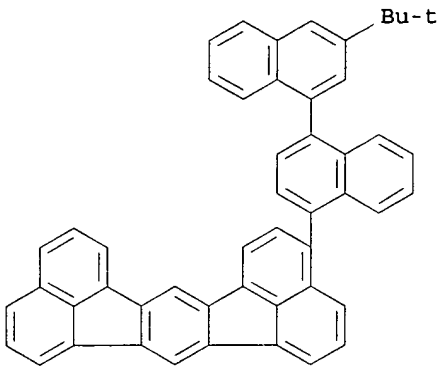
CN Acenaphtho[1,2-k]fluoranthene, 7,14-diethyl-3-(4'-ethyl[1,1'-binaphthalen]-4-yl)- (9CI) (CA INDEX NAME)



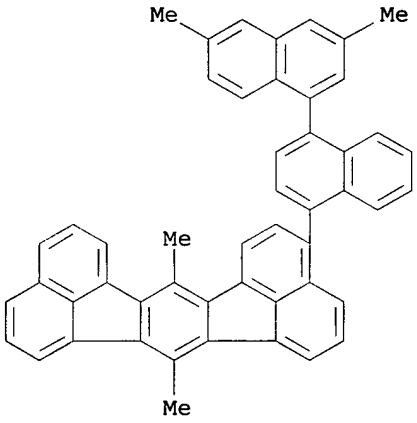

RN 396099-76-6 HCAPLUS
CN Acenaphtho[1,2-k]fluoranthene, 7,14-dipropyl-3-(4'-propyl[1,1'-binaphthalen]-4-yl)- (9CI) (CA INDEX NAME)



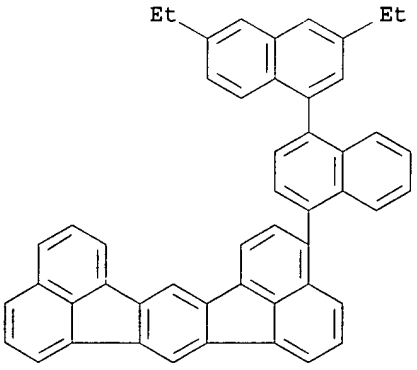

RN 396099-77-7 HCAPLUS
CN Acenaphtho[1,2-k]fluoranthene, 3-[3'-(1,1-dimethylethyl)[1,1'-binaphthalen]-4-yl]- (9CI) (CA INDEX NAME)



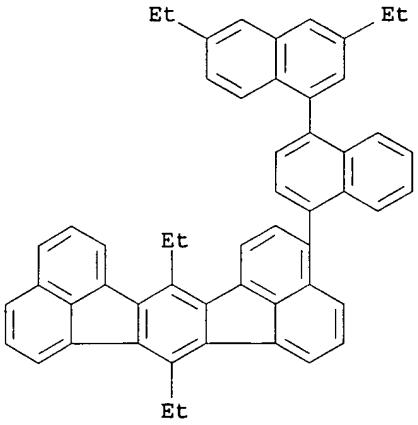

RN 396099-78-8 HCAPLUS
CN Acenaphtho[1,2-k]fluoranthene, 3-(3',6'-dimethyl[1,1'-binaphthalen]-4-yl)-7,14-dimethyl- (9CI) (CA INDEX NAME)



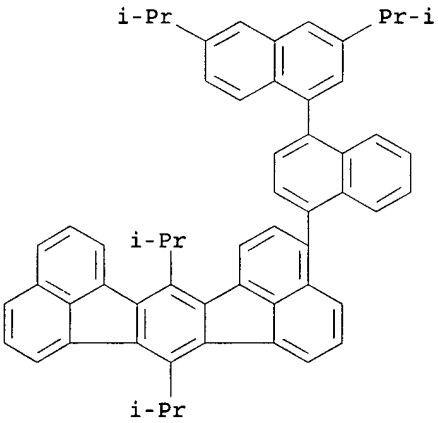

RN 396099-79-9 HCAPLUS
CN Acenaphtho[1,2-k]fluoranthene, 3-(3',6'-diethyl[1,1'-binaphthalen]-4-yl)- (9CI) (CA INDEX NAME)



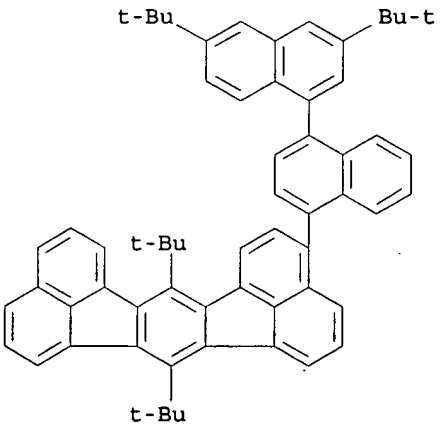

RN 396099-80-2 HCAPLUS
CN Acenaphtho[1,2-k]fluoranthene, 3-(3',6'-diethyl[1,1'-binaphthalen]-4-yl)-7,14-diethyl- (9CI) (CA INDEX NAME)



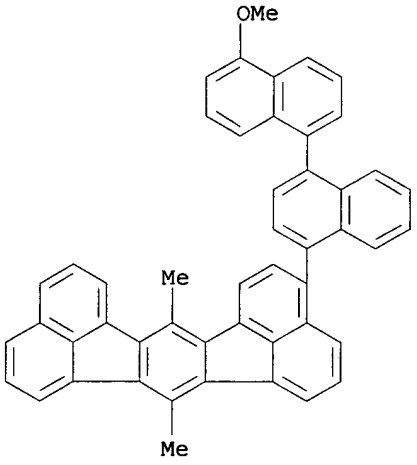

RN 396099-81-3 HCAPLUS
CN Acenaphtho[1,2-k]fluoranthene, 3-[3',6'-bis(1-methylethyl)[1,1'-binaphthalen]-4-yl]-7,14-bis(1-methylethyl)- (9CI) (CA INDEX NAME)



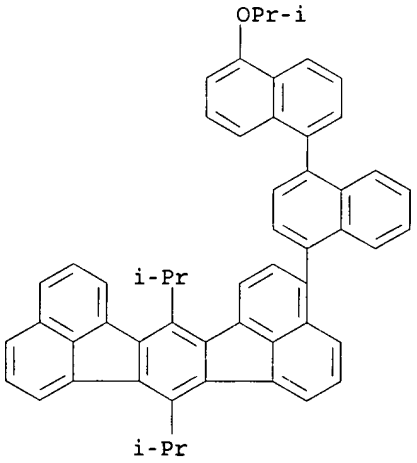

RN 396099-82-4 HCAPLUS
CN Acenaphtho[1,2-k]fluoranthene, 3-[3',6'-bis(1,1-dimethylethyl)[1,1'-binaphthalen]-4-yl]-7,14-bis(1,1-dimethylethyl)- (9CI) (CA INDEX NAME)



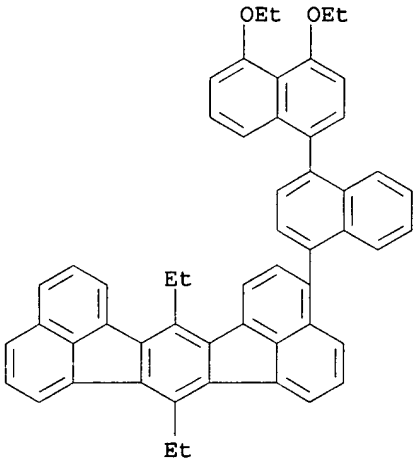
RN 396099-83-5 HCAPLUS
CN Acenaphtho[1,2-k]fluoranthene, 3-(5'-methoxy[1,1'-binaphthalen]-4-yl)-7,14-dimethyl- (9CI) (CA INDEX NAME)



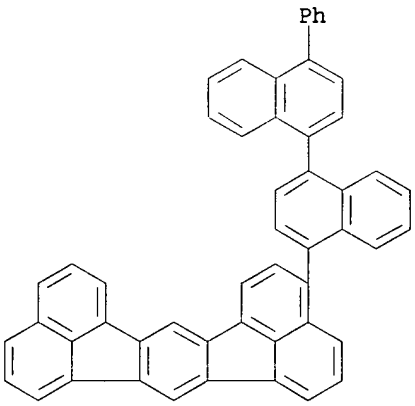

RN 396099-84-6 HCAPLUS
CN Acenaphtho[1,2-k]fluoranthene, 3-[5'-(1-methylethoxy)[1,1'-binaphthalen]-4-yl]-7,14-bis(1-methylethyl)- (9CI) (CA INDEX NAME)



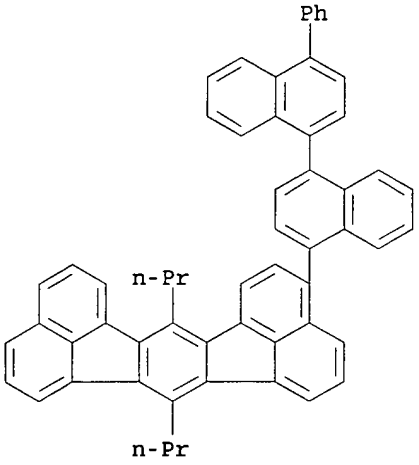

RN 396099-85-7 HCAPLUS
CN Acenaphtho[1,2-k]fluoranthene, 3-(4',5'-diethoxy[1,1'-binaphthalen]-4-yl)-7,14-diethyl- (9CI) (CA INDEX NAME)



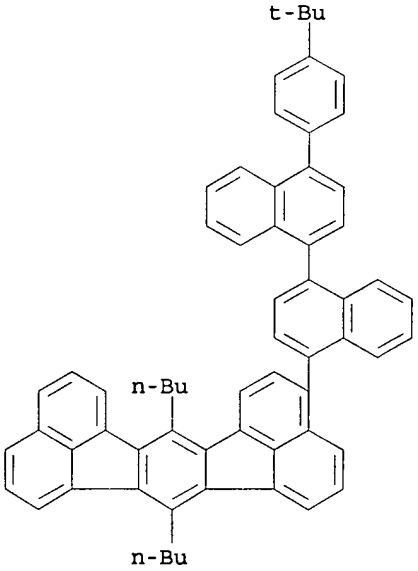

RN 396099-86-8 HCAPLUS
CN Acenaphtho[1,2-k]fluoranthene, 3-(4'-phenyl[1,1'-binaphthalen]-4-yl)- (9CI) (CA INDEX NAME)



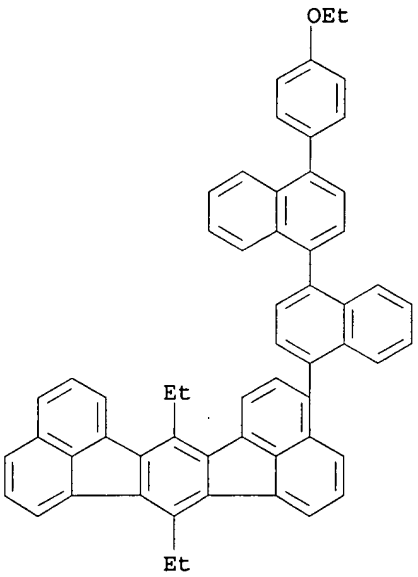

RN 396099-87-9 HCAPLUS
CN Acenaphtho[1,2-k]fluoranthene, 3-(4'-phenyl[1,1'-binaphthalen]-4-yl)-7,14-dipropyl- (9CI) (CA INDEX NAME)



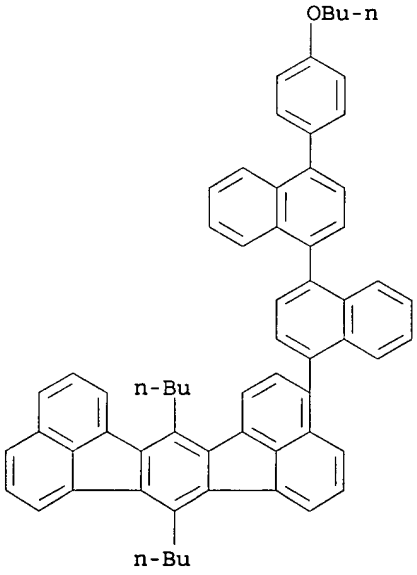

RN 396099-88-0 HCAPLUS
CN Acenaphtho[1,2-k]fluoranthene, 7,14-dibutyl-3-[4'-[4-(1,1-dimethylethyl)phenyl][1,1'-binaphthalen]-4-yl]- (9CI) (CA INDEX NAME)



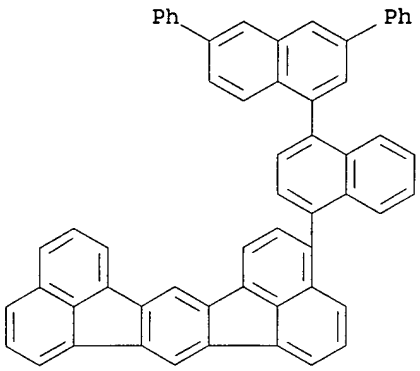

RN 396099-89-1 HCAPLUS
CN Acenaphtho[1,2-k]fluoranthene, 3-[4'-(4-ethoxyphenyl)[1,1'-binaphthalen]-4-yl]-7,14-diethyl- (9CI) (CA INDEX NAME)



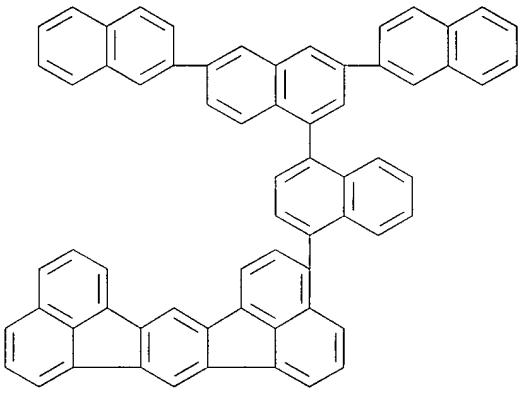

RN 396099-90-4 HCAPLUS
CN Acenaphtho[1,2-k]fluoranthene, 3-[4'-(4-butoxyphenyl)[1,1'-binaphthalen]-4-yl]-7,14-dibutyl- (9CI) (CA INDEX NAME)



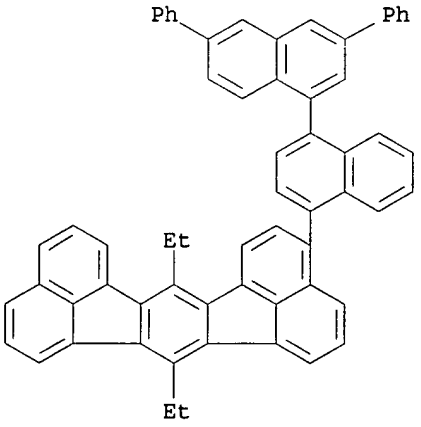

RN 396099-92-6 HCAPLUS
CN Acenaphtho[1,2-k]fluoranthene, 3-(3',6'-diphenyl[1,1'-binaphthalen]-4-yl)- (9CI) (CA INDEX NAME)



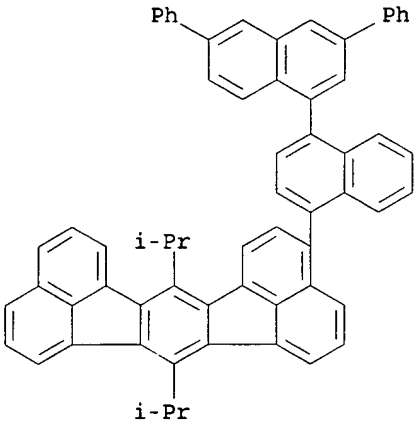

RN 396099-93-7 HCAPLUS
CN Acenaphtho[1,2-k]fluoranthene, 3-[6'-(2-naphthalenyl)[1,1':3',2''-ternaphthalen]-4-yl]- (9CI) (CA INDEX NAME)



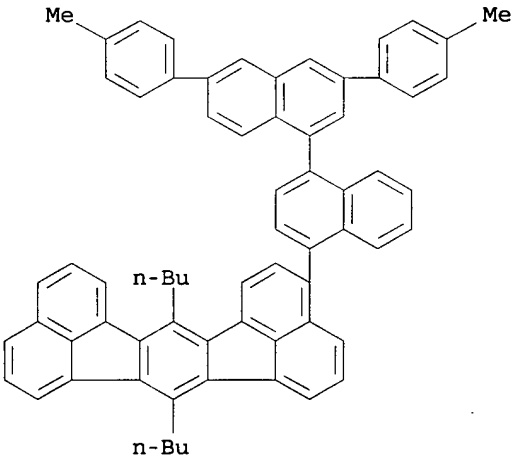
RN 396099-94-8 HCAPLUS
CN Acenaphtho[1,2-k]fluoranthene, 3-(3',6'-diphenyl[1,1'-binaphthalen]-4-yl)-7,14-diethyl- (9CI) (CA INDEX NAME)



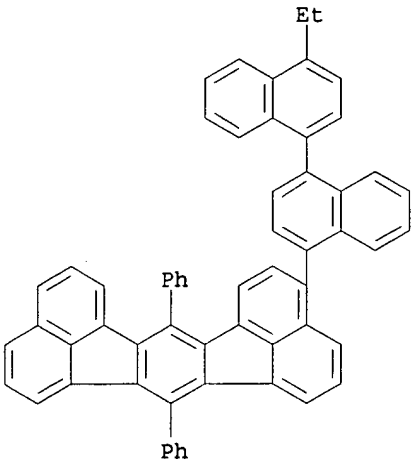

RN 396099-95-9 HCAPLUS
CN Acenaphtho[1,2-k]fluoranthene, 3-(3',6'-diphenyl[1,1'-binaphthalen]-4-yl)-7,14-bis(1-methylethyl)- (9CI) (CA INDEX NAME)



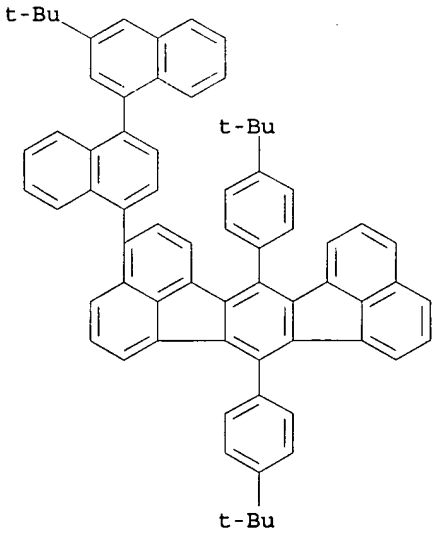

RN 396099-96-0 HCAPLUS
CN Acenaphtho[1,2-k]fluoranthene, 3-[3',6'-bis(4-methylphenyl)[1,1'-binaphthalen]-4-yl]-7,14-dibutyl- (9CI) (CA INDEX NAME)



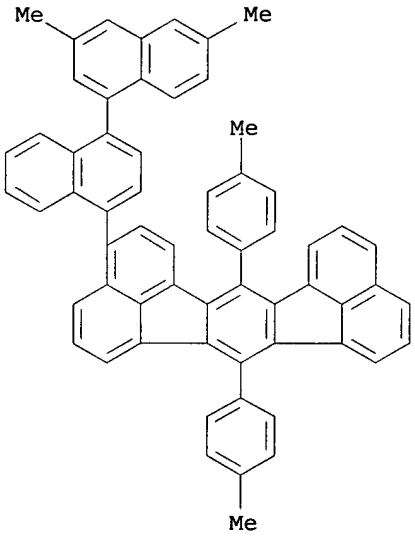

RN 396099-97-1 HCAPLUS
CN Acenaphtho[1,2-k]fluoranthene, 3-(4'-ethyl[1,1'-binaphthalen]-4-yl)-7,14-diphenyl- (9CI) (CA INDEX NAME)



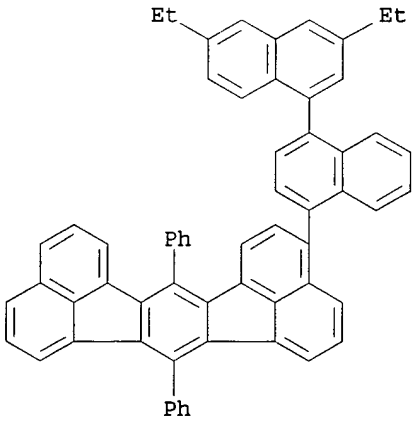

RN 396099-98-2 HCAPLUS
CN Acenaphtho[1,2-k]fluoranthene, 3-[3'-(1,1-dimethylethyl)[1,1'-binaphthalen]-4-yl]-7,14-bis[4-(1,1-dimethylethyl)phenyl]- (9CI) (CA INDEX NAME)



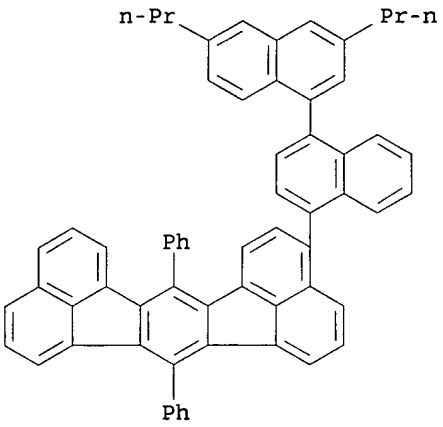

RN 396099-99-3 HCAPLUS
CN Acenaphtho[1,2-k]fluoranthene, 3-(3',6'-dimethyl[1,1'-binaphthalen]-4-yl)-7,14-bis(4-methylphenyl)- (9CI) (CA INDEX NAME)



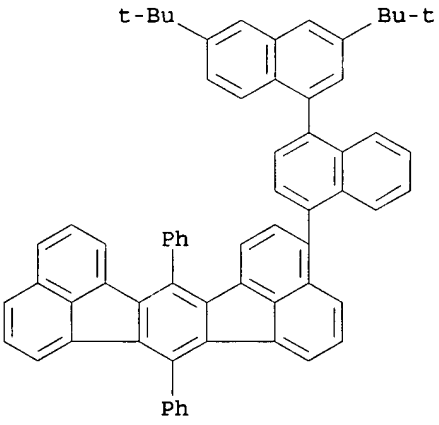

RN 396100-00-8 HCAPLUS
CN Acenaphtho[1,2-k]fluoranthene, 3-(3',6'-diethyl[1,1'-binaphthalen]-4-yl)-7,14-diphenyl- (9CI) (CA INDEX NAME)




RN 396100-01-9 HCAPLUS
CN Acenaphtho[1,2-k]fluoranthene, 3-(3',6'-dipropyl[1,1'-binaphthalen]-4-yl)-7,14-diphenyl- (9CI) (CA INDEX NAME)




RN 396100-02-0 HCAPLUS
CN Acenaphtho[1,2-k]fluoranthene, 3-[3',6'-bis(1,1-dimethylethyl)[1,1'-binaphthalen]-4-yl]-7,14-diphenyl- (9CI) (CA INDEX NAME)




RN 396100-03-1 HCAPLUS
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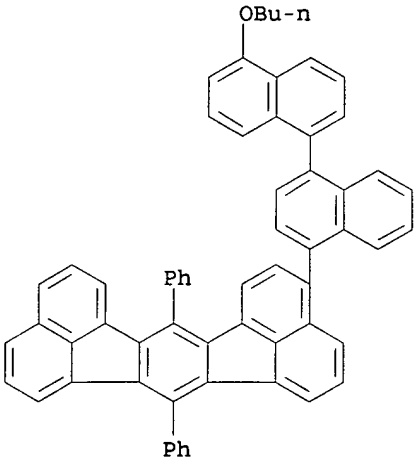
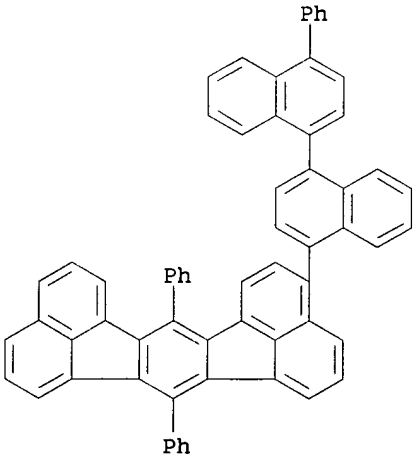



RN 396100-04-2 HCAPLUS
CN Acenaphtho[1,2-k]fluoranthene, 7,14-diphenyl-3-(4'-phenyl[1,1'-binaphthalen]-4-yl)- (9CI) (CA INDEX NAME)




RN 396100-05-3 HCAPLUS
CN Acenaphtho[1,2-k]fluoranthene, 7,14-bis(4-methylphenyl)-3-[4'-(4-methylphenyl)[1,1'-binaphthalen]-4-yl]- (9CI) (CA INDEX NAME)

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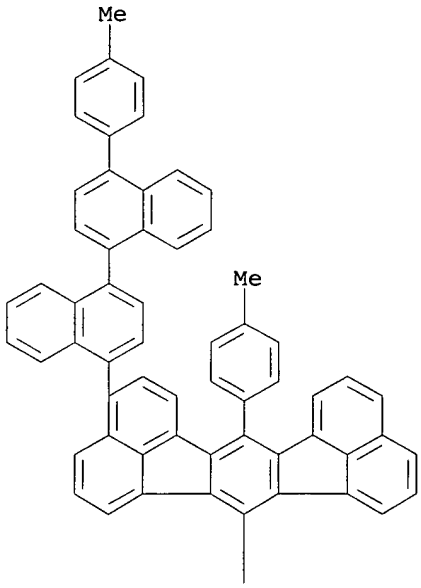
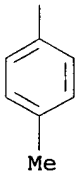
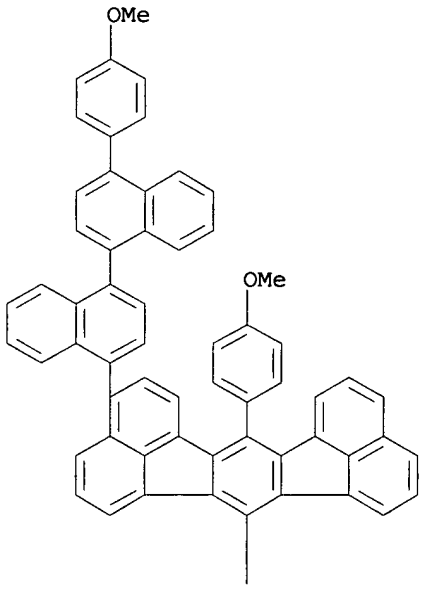



PAGE 2-A

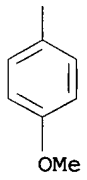



RN 396100-06-4 HCAPLUS
CN Acenaphtho[1,2-k]fluoranthene, 7,14-bis(4-methoxyphenyl)-3-[4'-(4-methoxyphenyl)[1,1'-binaphthalen]-4-yl]- (9CI) (CA INDEX NAME)

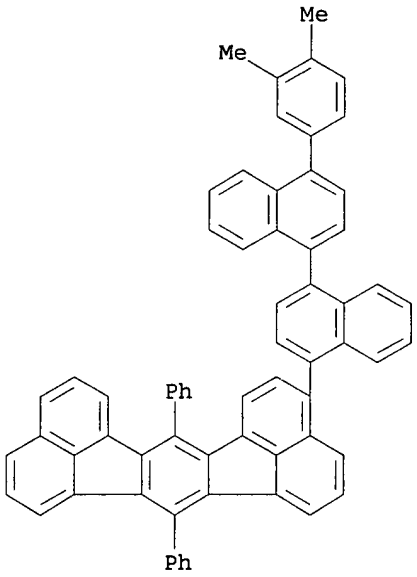
PAGE 1-A



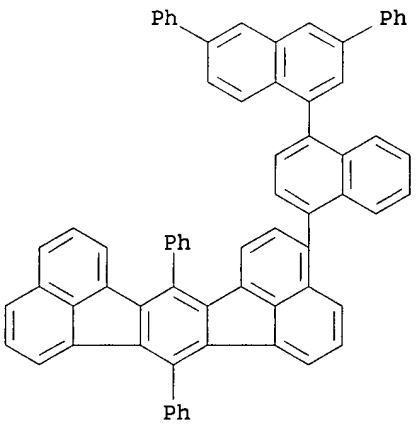

PAGE 2-A



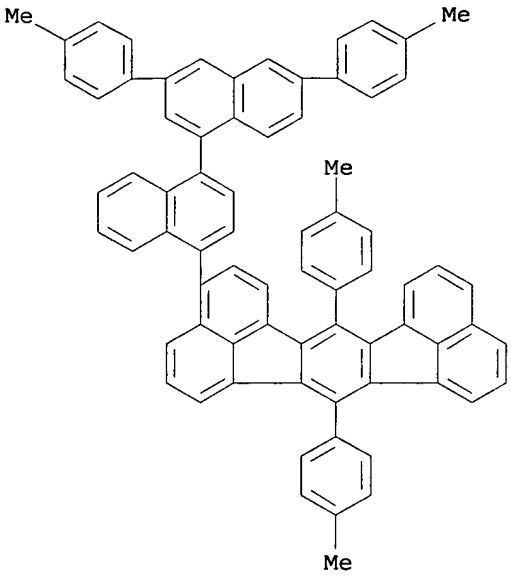

RN 396100-07-5 HCAPLUS
CN Acenaphtho[1,2-k]fluoranthene, 3-[4'-(3,4-dimethylphenyl)[1,1'-binaphthalen]-4-yl]-7,14-diphenyl- (9CI) (CA INDEX NAME)



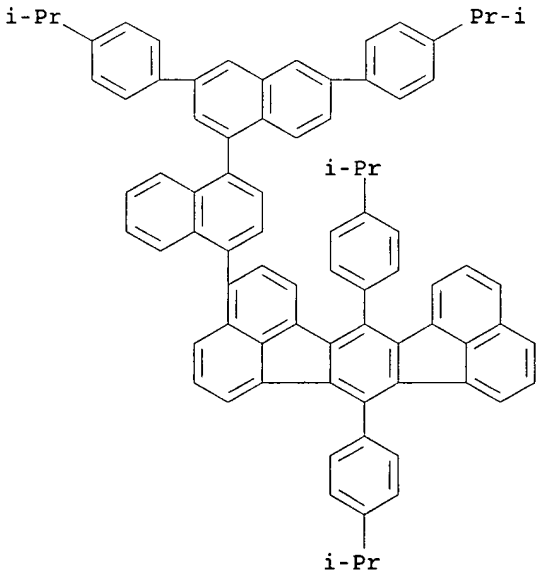

RN 396100-08-6 HCAPLUS
CN Acenaphtho[1,2-k]fluoranthene, 3-(3',6'-diphenyl[1,1'-binaphthalen]-4-yl)-7,14-diphenyl- (9CI) (CA INDEX NAME)




RN 396100-09-7 HCAPLUS
CN Acenaphtho[1,2-k]fluoranthene, 3-[3',6'-bis(4-methylphenyl)[1,1'-binaphthalen]-4-yl]-7,14-bis(4-methylphenyl)- (9CI) (CA INDEX NAME)




RN 396100-10-0 HCAPLUS
CN Acenaphtho[1,2-k]fluoranthene, 3-[3',6'-bis[4-(1-methylethyl)phenyl][1,1'-binaphthalen]-4-yl]-7,14-bis[4-(1-methylethyl)phenyl]- (9CI) (CA INDEX NAME)




IC ICM H05B033-14
ICS C07C013-62; C07C043-20; C07C043-21; C09K011-06
CC 73-11 (**Optical**, Electron, and Mass Spectroscopy and Other Related Properties)
Section cross-reference(s): 25
ST **electroluminescent** device benzoacenaphthofluorenopentaphene deriv
IT **Electroluminescent** devices
(novel dibenzoacenaphthofluorenopentaphene derivs. for)
IT Fluorescent substances
(novel dibenzoacenaphthofluorenopentaphene derivs. for organic

**electroluminescent** devices)
IT Hydrocarbons, uses
Polycarbonates, uses
RL: DEV (Device component use); RCT (Reactant); RACT (Reactant or reagent); USES (Uses)
(novel dibenzoacenaphthofluorenopentaphene derivs. for organic **electroluminescent** devices)
IT 1450-63-1
RL: DEV (Device component use); USES (Uses)
(blue-**light-emitting** component; novel dibenzoacenaphthofluorenopentaphene derivs. for organic **electroluminescent** devices)
IT 38215-36-0
RL: DEV (Device component use); USES (Uses)
(green-**light-emitting** component; novel dibenzoacenaphthofluorenopentaphene derivs. for organic **electroluminescent** devices)
IT 65181-78-4
RL: DEV (Device component use); USES (Uses)
(hole injection/transport layer; novel dibenzoacenaphthofluorenopentaphene derivs. for organic **electroluminescent** devices)
IT 138372-67-5 146162-48-3 146162-54-1
RL: DEV (Device component use); USES (Uses)
(**light-emitting** layer containing; novel dibenzoacenaphthofluorenopentaphene derivs. for organic **electroluminescent** devices)
IT 2085-33-8, Alq3 25067-59-8 124729-98-2 150405-69-9
396100-11-1 396100-12-2 396100-13-3 396100-14-4
396100-15-5 396100-16-6 396100-17-7 396100-18-8
396100-19-9 396100-20-2 396100-21-3 396100-22-4
396100-23-5 396100-24-6 396100-25-7 396100-26-8
396100-27-9 396100-28-0 396100-29-1 396100-30-4
396100-31-5 396100-32-6 396100-33-7 396100-34-8
396100-35-9 396100-36-0 396100-37-1 396100-38-2
396100-39-3 396100-40-6 396100-41-7 396100-42-8
396100-43-9 396100-44-0 396100-45-1 396100-46-2
396100-47-3
RL: DEV (Device component use); USES (Uses)
(novel dibenzoacenaphthofluorenopentaphene derivs. for organic **electroluminescent** devices)
IT **390761-74-7 390761-74-7D**, derivs.
**390762-17-1 396099-75-5 396099-76-6**
**396099-77-7 396099-78-8 396099-79-9**
**396099-80-2 396099-81-3 396099-82-4**
**396099-83-5 396099-84-6 396099-85-7**
**396099-86-8 396099-87-9 396099-88-0**
**396099-89-1 396099-90-4 396099-92-6**
**396099-93-7 396099-94-8 396099-95-9**
**396099-96-0 396099-97-1 396099-98-2**
**396099-99-3 396100-00-8 396100-01-9**
**396100-02-0 396100-03-1 396100-04-2**
**396100-05-3 396100-06-4 396100-07-5**
**396100-08-6 396100-09-7 396100-10-0**
RL: RCT (Reactant); RACT (Reactant or reagent)
(novel dibenzoacenaphthofluorenopentaphene derivs. for organic **electroluminescent** devices)

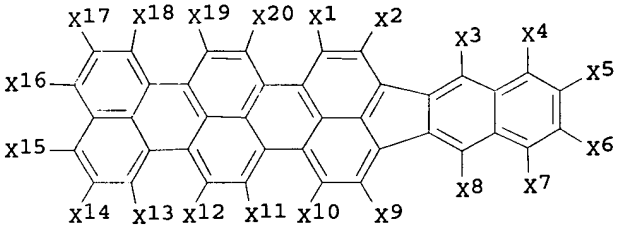
L54 ANSWER 35 OF 51 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2002:69661 HCAPLUS
DOCUMENT NUMBER: 136:126326
TITLE: Dibenzo[kl,rst]benzo[6,7]fluoreno[9,1,2-cde]pentaphene derivatives and organic **electroluminescent** devices containing the same
INVENTOR(S): Ishida, Tsutomu; Shimamura, Takehiko;

Nakatsuka, Masakatsu
PATENT ASSIGNEE(S): Mitsui Chemicals Inc., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 56 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| JP 2002025777 | A2 | 20020125 | JP 2000-209226 | 2000 0711 |

PRIORITY APPLN. INFO.: JP 2000-209226 2000 0711

OTHER SOURCE(S): MARPAT 136:126326
GI

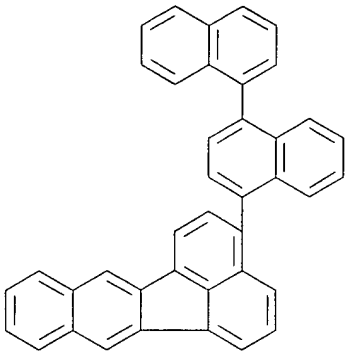



I

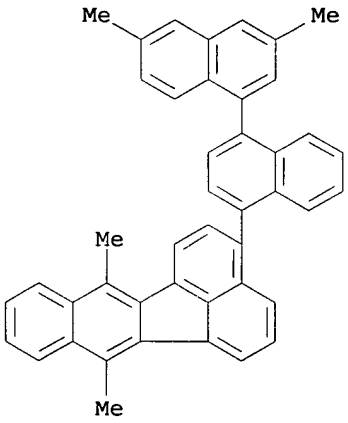
AB The organic **EL** devices have a pair of **electrodes** and in between, ≥1 layers, maybe emitter layers, containing dibenzo[kl,rst]benzo[6,7]fluoreno[9,1,2-cde]pentaphene derivs., which may be shown as I (X1-X20 = H, halogen, alkyl, alkoxy, aryl). The I-containing layer may further contain luminescent organometal complexes and triarylamine derivs. The device may further have a hole injection and transport layer and an electron injection and transport layer between the **electrodes.** The device have high luminescent efficiency and high brightness.

IT **390774-44-4 390774-45-5 390774-46-6**
**390774-47-7 390774-48-8 390774-49-9**
**390774-50-2 390774-51-3 390774-52-4**
**390774-53-5 390774-54-6 390774-55-7**
**390774-56-8 390774-57-9 390774-58-0**
**390774-59-1 390774-60-4 390774-61-5**
**390774-62-6 390774-63-7 390774-64-8**
**390774-65-9 390774-66-0 390774-67-1**
**390774-68-2 390774-69-3 390774-70-6**
**390774-71-7 390774-72-8 390774-73-9**
**390774-74-0 390774-75-1 390774-76-2**
**390775-05-0**
RL: RCT (Reactant); RACT (Reactant or reagent)
(organic **EL** devices containing dibenzo[kl,rst]benzo[6,7]fluoreno[9,1,2-cde]pentaphene derivs. in emitter layers prepared from)

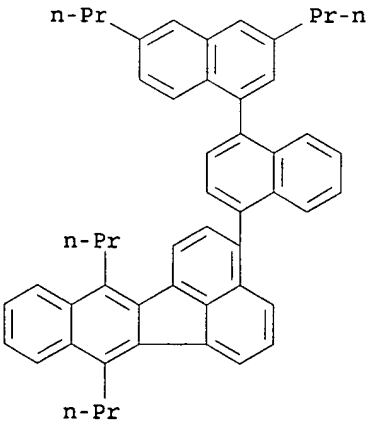
RN 390774-44-4 HCAPLUS
CN Benzo[k]fluoranthene, 3-[1,1'-binaphthalen]-4-yl- (9CI) (CA INDEX NAME)



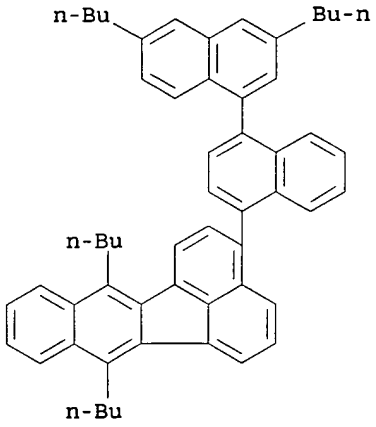
RN 390774-45-5 HCAPLUS
CN Benzo[k]fluoranthene, 3-(3',6'-dimethyl[1,1'-binaphthalen]-4-yl)-7,12-dimethyl- (9CI) (CA INDEX NAME)



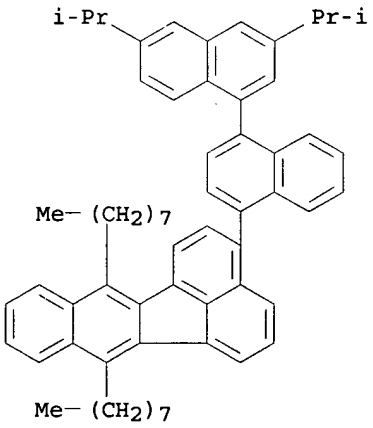

RN 390774-46-6 HCAPLUS
CN Benzo[k]fluoranthene, 3-(3',6'-dipropyl[1,1'-binaphthalen]-4-yl)-7,12-dipropyl- (9CI) (CA INDEX NAME)



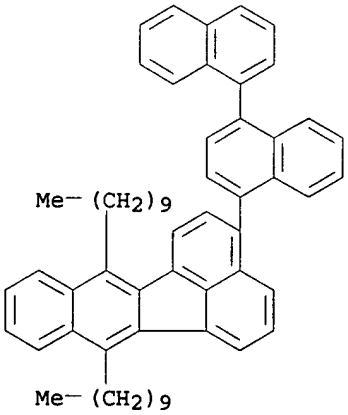

RN 390774-47-7 HCAPLUS
CN Benzo[k]fluoranthene, 7,12-dibutyl-3-(3',6'-dibutyl[1,1'-binaphthalen]-4-yl)- (9CI) (CA INDEX NAME)



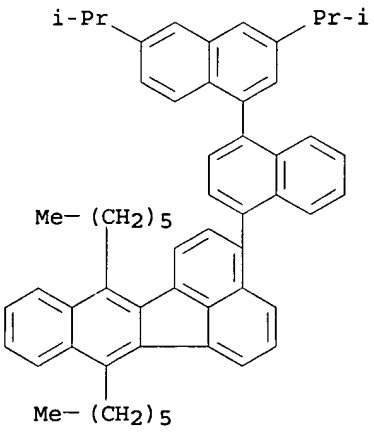

RN 390774-48-8 HCAPLUS
CN Benzo[k]fluoranthene, 3-[3',6'-bis(1-methylethyl)[1,1'-binaphthalen]-4-yl]-7,12-dioctyl- (9CI) (CA INDEX NAME)



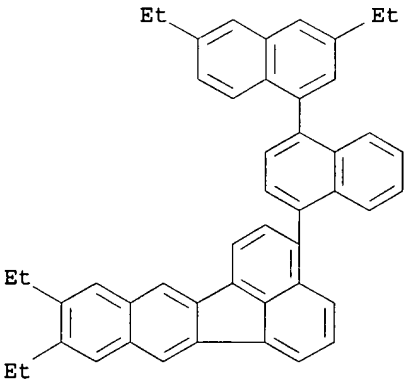

RN 390774-49-9 HCAPLUS
CN Benzo[k]fluoranthene, 3-[1,1'-binaphthalen]-4-yl-7,12-didecyl- (9CI) (CA INDEX NAME)



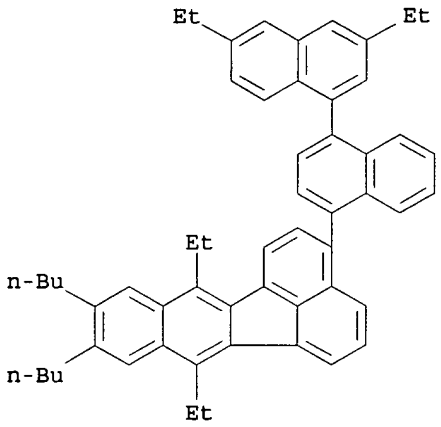
RN 390774-50-2 HCAPLUS
CN Benzo[k]fluoranthene, 3-[3',6'-bis(1-methylethyl)[1,1'-binaphthalen]-4-yl]-7,12-dihexyl- (9CI) (CA INDEX NAME)



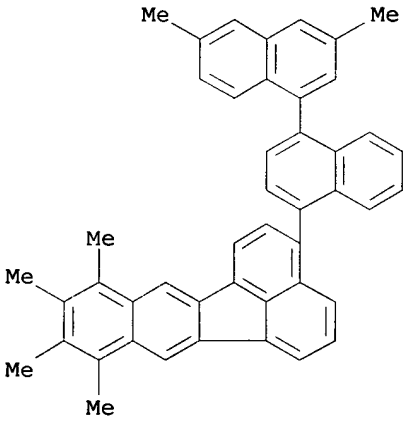

RN 390774-51-3 HCAPLUS
CN Benzo[k]fluoranthene, 3-(3',6'-diethyl[1,1'-binaphthalen]-4-yl)-9,10-diethyl- (9CI) (CA INDEX NAME)



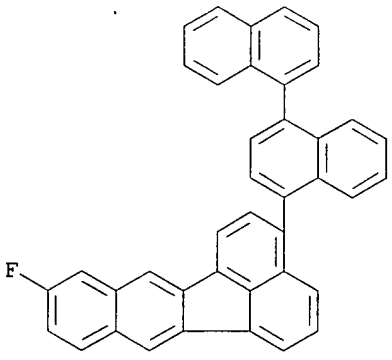

RN 390774-52-4 HCAPLUS
CN Benzo[k]fluoranthene, 9,10-dibutyl-3-(3',6'-diethyl[1,1'-binaphthalen]-4-yl)-7,12-diethyl- (9CI) (CA INDEX NAME)



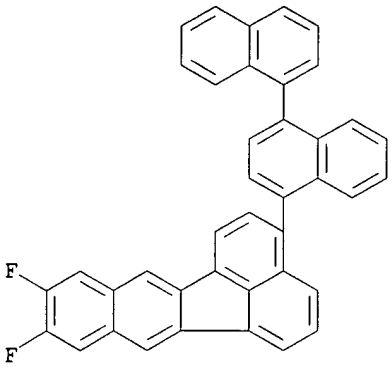

RN 390774-53-5 HCAPLUS
CN Benzo[k]fluoranthene, 3-(3',6'-dimethyl[1,1'-binaphthalen]-4-yl)-8,9,10,11-tetramethyl- (9CI) (CA INDEX NAME)



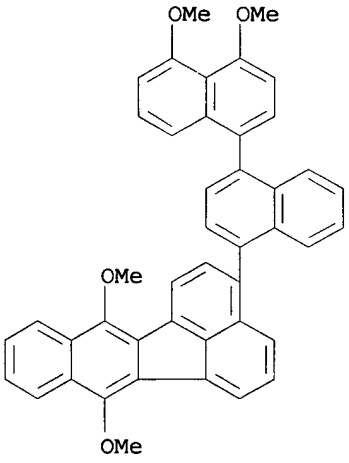

RN 390774-54-6 HCAPLUS
CN Benzo[k]fluoranthene, 3-[1,1'-binaphthalen]-4-yl-10-fluoro- (9CI) (CA INDEX NAME)



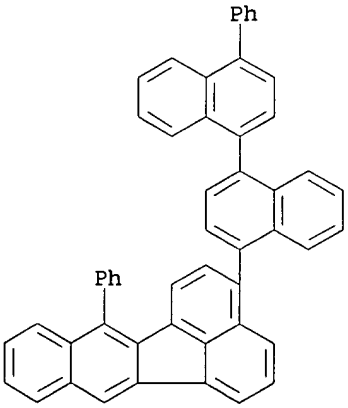

RN 390774-55-7 HCAPLUS
CN Benzo[k]fluoranthene, 3-[1,1'-binaphthalen]-4-yl-9,10-difluoro- (9CI) (CA INDEX NAME)



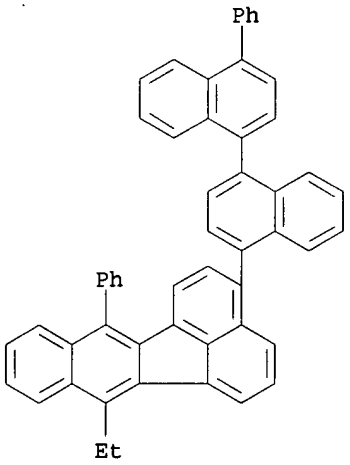

RN 390774-56-8 HCAPLUS
CN Benzo[k]fluoranthene, 3-(4',5'-dimethoxy[1,1'-binaphthalen]-4-yl)-7,12-dimethoxy- (9CI) (CA INDEX NAME)



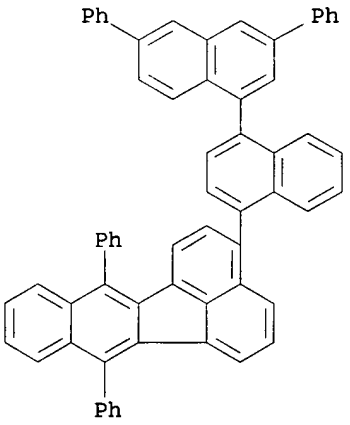

RN 390774-57-9 HCAPLUS
CN Benzo[k]fluoranthene, 12-phenyl-3-(4'-phenyl[1,1'-binaphthalen]-4-yl)- (9CI) (CA INDEX NAME)



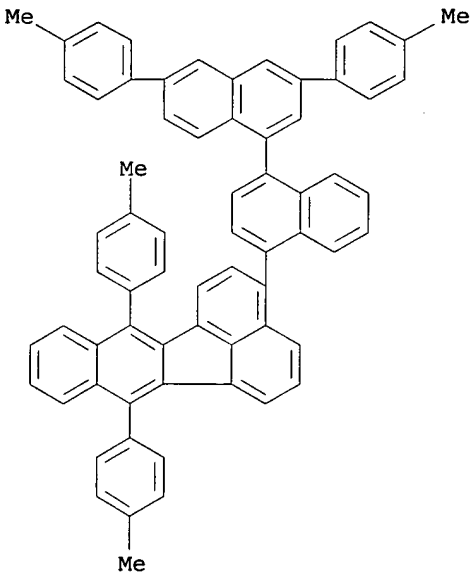
RN 390774-58-0 HCAPLUS
CN Benzo[k]fluoranthene, 7-ethyl-12-phenyl-3-(4'-phenyl[1,1'-binaphthalen]-4-yl)- (9CI) (CA INDEX NAME)




RN 390774-59-1 HCAPLUS
CN Benzo[k]fluoranthene, 3-(3',6'-diphenyl[1,1'-binaphthalen]-4-yl)-7,12-diphenyl- (9CI) (CA INDEX NAME)




RN 390774-60-4 HCAPLUS
CN Benzo[k]fluoranthene, 3-[3',6'-bis(4-methylphenyl)[1,1'-binaphthalen]-4-yl]-7,12-bis(4-methylphenyl)- (9CI) (CA INDEX NAME)




RN 390774-61-5 HCAPLUS
CN Benzo[k]fluoranthene, 7,12-bis(4-ethylphenyl)-3-[4'-(4-ethylphenyl)[1,1'-binaphthalen]-4-yl]- (9CI) (CA INDEX NAME)

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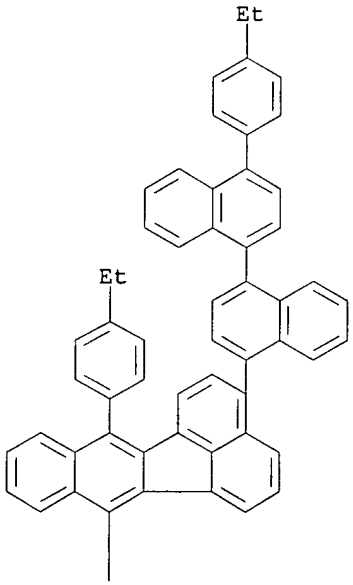

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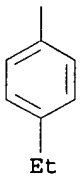
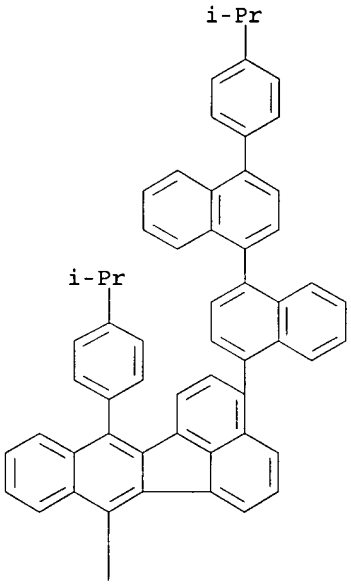
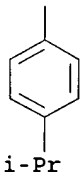



RN 390774-62-6 HCAPLUS
CN Benzo[k]fluoranthene, 7,12-bis[4-(1-methylethyl)phenyl]-3-[4'-[4-(1-methylethyl)phenyl][1,1'-binaphthalen]-4-yl]- (9CI) (CA INDEX NAME)

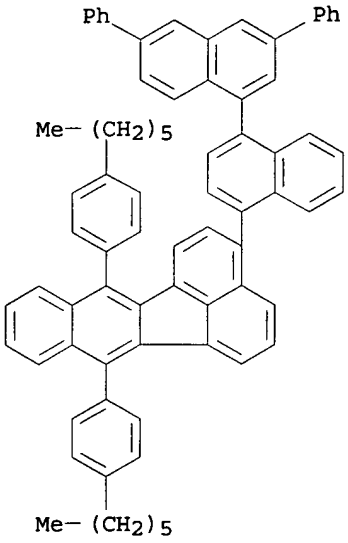
PAGE 1-A



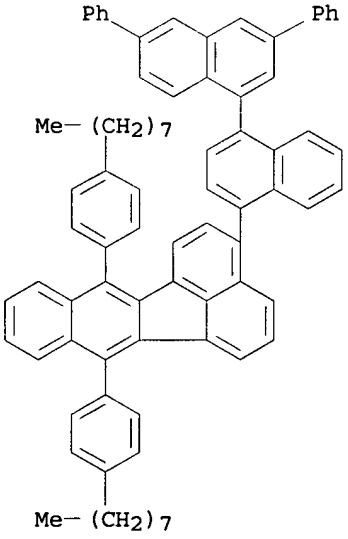

PAGE 2-A




RN 390774-63-7 HCAPLUS
CN Benzo[k]fluoranthene, 3-(3',6'-diphenyl[1,1'-binaphthalen]-4-yl)-7,12-bis(4-hexylphenyl)- (9CI) (CA INDEX NAME)




RN 390774-64-8 HCAPLUS
CN Benzo[k]fluoranthene, 3-(3',6'-diphenyl[1,1'-binaphthalen]-4-yl)-7,12-bis(4-octylphenyl)- (9CI) (CA INDEX NAME)




RN 390774-65-9 HCAPLUS
CN Benzo[k]fluoranthene, 7,12-bis(4-methoxyphenyl)-3-[4'-(4-methoxyphenyl)[1,1'-binaphthalen]-4-yl]- (9CI) (CA INDEX NAME)

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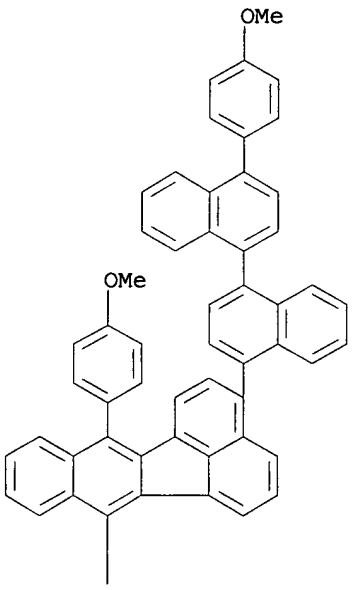
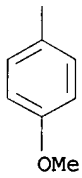
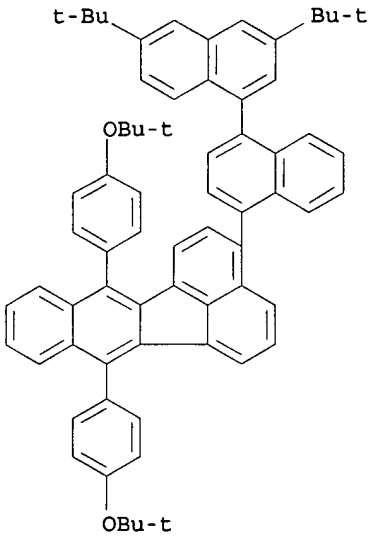


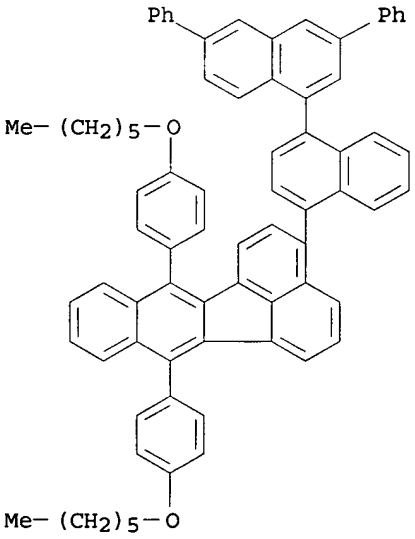

PAGE 2-A




RN 390774-66-0 HCAPLUS
CN Benzo[k]fluoranthene, 3-[3',6'-bis(1,1-dimethylethyl)[1,1'-binaphthalen]-4-yl]-7,12-bis[4-(1,1-dimethylethoxy)phenyl]- (9CI) (CA INDEX NAME)




RN 390774-67-1 HCAPLUS
CN Benzo[k]fluoranthene, 3-(3',6'-diphenyl[1,1'-binaphthalen]-4-yl)-7,12-bis[4-(hexyloxy)phenyl]- (9CI) (CA INDEX NAME)




RN 390774-68-2 HCAPLUS
CN Benzo[k]fluoranthene, 7,12-di-1-naphthalenyl-3-[1,1':4',1''-ternaphthalen]-4-yl- (9CI) (CA INDEX NAME)

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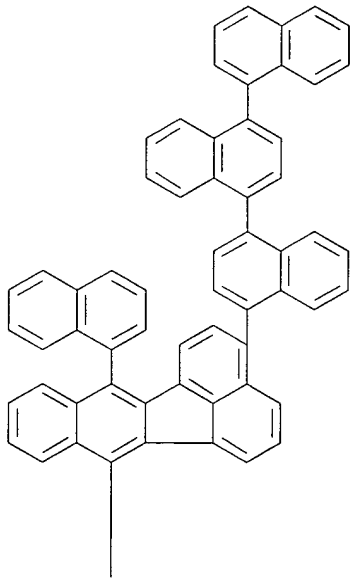
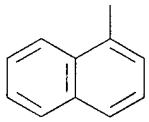
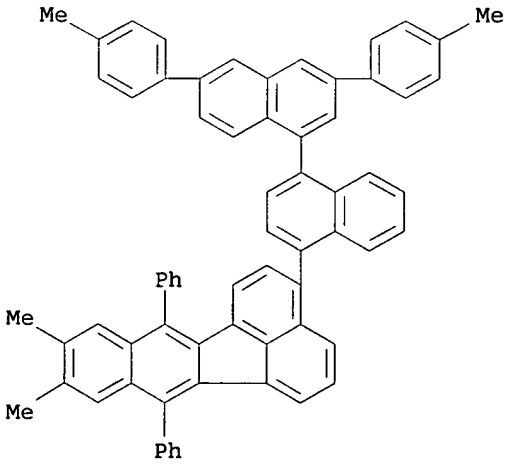


PAGE 2-A

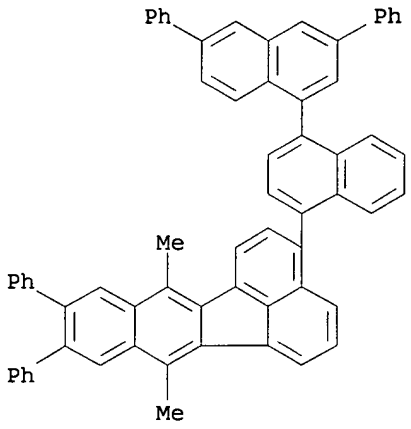


RN 390774-69-3 HCAPLUS
CN Benzo[k]fluoranthene, 3-[3',6'-bis(4-methylphenyl)[1,1'-binaphthalen]-4-yl]-9,10-dimethyl-7,12-diphenyl- (9CI) (CA INDEX NAME)

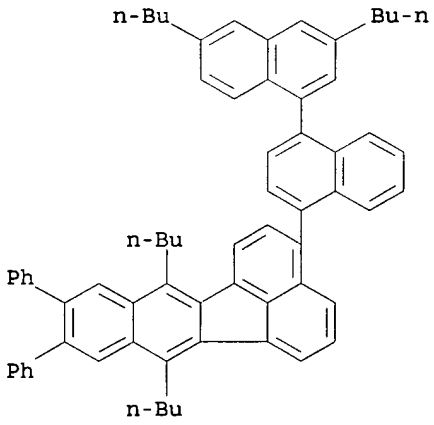



RN 390774-70-6 HCAPLUS
CN Benzo[k]fluoranthene, 3-(3',6'-diphenyl[1,1'-binaphthalen]-4-yl)-

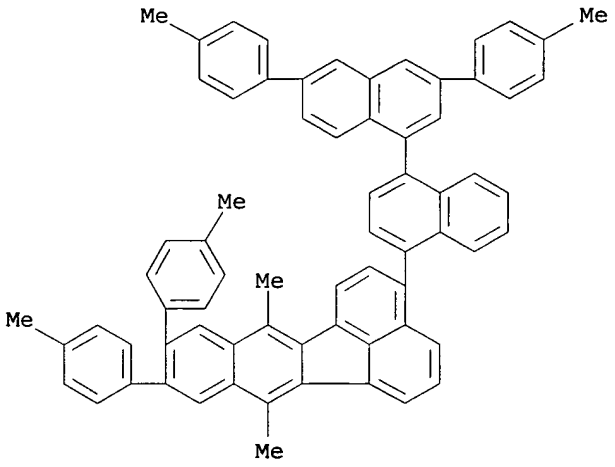
7,12-dimethyl-9,10-diphenyl- (9CI) (CA INDEX NAME)



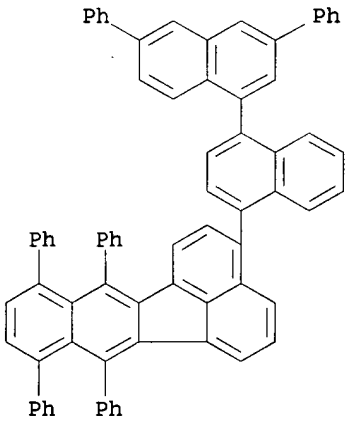

RN 390774-71-7 HCAPLUS
CN Benzo[k]fluoranthene, 7,12-dibutyl-3-(3',6'-dibutyl[1,1'-binaphthalen]-4-yl)-9,10-diphenyl- (9CI) (CA INDEX NAME)



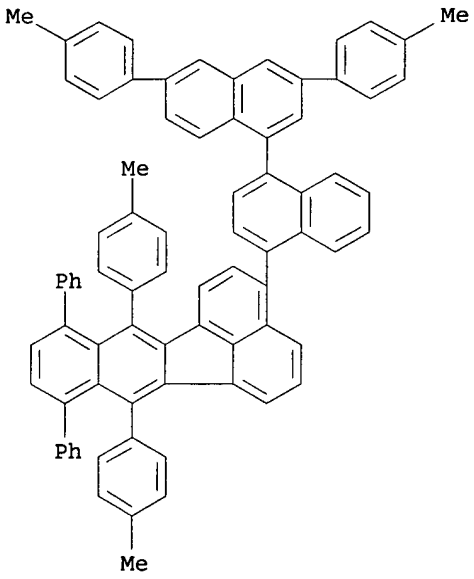

RN 390774-72-8 HCAPLUS
CN Benzo[k]fluoranthene, 3-[3',6'-bis(4-methylphenyl)[1,1'-binaphthalen]-4-yl]-7,12-dimethyl-9,10-bis(4-methylphenyl)- (9CI) (CA INDEX NAME)



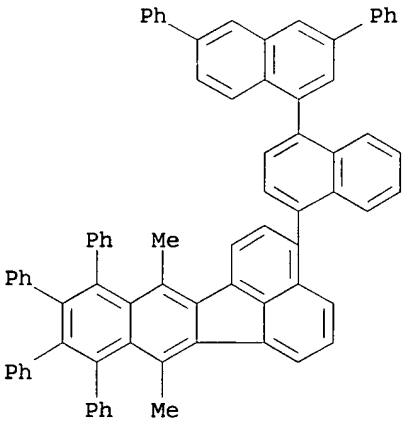

RN 390774-73-9 HCAPLUS
CN Benzo[k]fluoranthene, 3-(3',6'-diphenyl[1,1'-binaphthalen]-4-yl)-7,8,11,12-tetraphenyl- (9CI) (CA INDEX NAME)



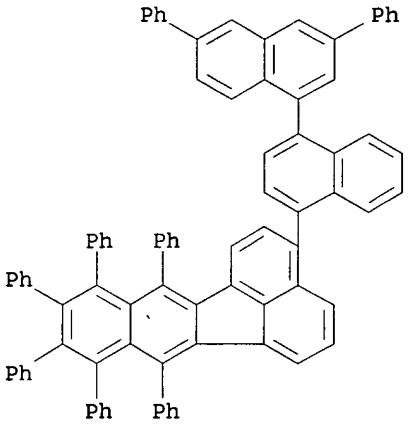

RN 390774-74-0 HCAPLUS
CN Benzo[k]fluoranthene, 3-[3',6'-bis(4-methylphenyl)[1,1'-binaphthalen]-4-yl]-7,12-bis(4-methylphenyl)-8,11-diphenyl- (9CI) (CA INDEX NAME)



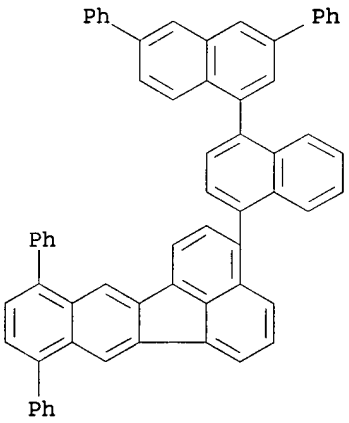

RN 390774-75-1 HCAPLUS
CN Benzo[k]fluoranthene, 3-(3',6'-diphenyl[1,1'-binaphthalen]-4-yl)-7,12-dimethyl-8,9,10,11-tetraphenyl- (9CI) (CA INDEX NAME)




RN 390774-76-2 HCAPLUS
CN Benzo[k]fluoranthene, 3-(3',6'-diphenyl[1,1'-binaphthalen]-4-yl)-7,8,9,10,11,12-hexaphenyl- (9CI) (CA INDEX NAME)



RN 390775-05-0 HCAPLUS
CN Benzo[k]fluoranthene, 3-(3',6'-diphenyl[1,1'-binaphthalen]-4-yl)-8,11-diphenyl- (9CI) (CA INDEX NAME)



IC ICM H05B033-14
ICS C07C013-62; C07C025-22; C07C043-21; C09K011-06
CC 73-11 (**Optical**, Electron, and Mass Spectroscopy and Other Related Properties)
Section cross-reference(s): 25, 74
ST org **electroluminescent** device emitter dibenzobenzofluorenopentaphene deriv
IT Polycyclic compounds
RL: PNU (Preparation, unclassified); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(aromatic hydrocarbons; organic **EL** devices containing dibenzo[kl,rst]benzo[6,7]fluoreno[9,1,2-cde]pentaphene derivs. in emitter layers)
IT Amines, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(aryl, tertiary, hole injection and transport layer; organic **EL** devices containing dibenzo[kl,rst]benzo[6,7]fluoreno[9,1,2-cde]pentaphene derivs. in emitter layers)
IT **Electroluminescent** devices
(organic; organic **EL** devices containing dibenzo[kl,rst]benzo[6,7]fluoreno[9,1,2-cde]pentaphene derivs. in emitter layers)
IT Aromatic hydrocarbons, uses
RL: PNU (Preparation, unclassified); TEM (Technical or engineered

material use); PREP (Preparation); USES (Uses)
(polycyclic; organic **EL** devices containing dibenzo[kl,rst]benzo[6,7]fluoreno[9,1,2-cde]pentaphene derivs. in emitter layers)

IT 2085-33-8 150405-69-9, 3-(4'-tert-Butylphenyl)-4-phenyl-5-(4''-biphenyl)-1,2,4-triazole
RL: TEM (Technical or engineered material use); USES (Uses)
(electron injection and transport layer; organic **EL** devices containing dibenzo[kl,rst]benzo[6,7]fluoreno[9,1,2-cde]pentaphene derivs. in emitter layers)

IT 1450-63-1, 1,1,4,4-Tetraphenyl-1,3-butadiene 38215-36-0, Coumarin 6 146162-54-1
RL: TEM (Technical or engineered material use); USES (Uses)
(emitter layer containing; organic **EL** devices containing dibenzo[kl,rst]benzo[6,7]fluoreno[9,1,2-cde]pentaphene derivs. in emitter layers)

IT 390774-11-5P 390774-12-6P 390774-13-7P 390774-14-8P
390774-15-9P 390774-16-0P 390774-17-1P 390774-18-2P
390774-19-3P 390774-20-6P 390774-21-7P 390774-22-8P
390774-23-9P 390774-24-0P 390774-25-1P 390774-26-2P
390774-27-3P 390774-28-4P 390774-29-5P 390774-30-8P
390774-31-9P 390774-32-0P 390774-33-1P 390774-34-2P
390774-35-3P 390774-36-4P 390774-37-5P 390774-38-6P
390774-40-0P 390774-41-1P 390774-42-2P 390774-43-3P
390774-79-5P
RL: PNU (Preparation, unclassified); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(emitter layers for organic **EL** devices)

IT 65181-78-4 124729-98-2
RL: TEM (Technical or engineered material use); USES (Uses)
(hole injection and transport layer; organic **EL** devices containing dibenzo[kl,rst]benzo[6,7]fluoreno[9,1,2-cde]pentaphene derivs. in emitter layers)

IT 390774-39-7P
RL: PNU (Preparation, unclassified); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(organic **EL** devices containing dibenzo[kl,rst]benzo[6,7]fluoreno[9,1,2-cde]pentaphene derivs. in emitter layers)

IT 24601-13-6, Bis(2-methyl-8-quinolinolato)aluminum-μ-oxo-bis(2-methyl-8-quinolinolato)aluminum 146162-48-3, Bis(2,4-dimethyl-8-quinolinolato)aluminum-μ-oxo-bis(2,4-dimethyl-8-quinolinolato)aluminum
RL: TEM (Technical or engineered material use); USES (Uses)
(organic **EL** devices containing dibenzo[kl,rst]benzo[6,7]fluoreno[9,1,2-cde]pentaphene derivs. in emitter layers)

IT **390774-44-4 390774-45-5 390774-46-6**
**390774-47-7 390774-48-8 390774-49-9**
**390774-50-2 390774-51-3 390774-52-4**
**390774-53-5 390774-54-6 390774-55-7**
**390774-56-8 390774-57-9 390774-58-0**
**390774-59-1 390774-60-4 390774-61-5**
**390774-62-6 390774-63-7 390774-64-8**
**390774-65-9 390774-66-0 390774-67-1**
**390774-68-2 390774-69-3 390774-70-6**
**390774-71-7 390774-72-8 390774-73-9**
**390774-74-0 390774-75-1 390774-76-2**
**390775-05-0**
RL: RCT (Reactant); RACT (Reactant or reagent)
(organic **EL** devices containing dibenzo[kl,rst]benzo[6,7]fluoreno[9,1,2-cde]pentaphene derivs. in emitter layers prepared from)

L54 ANSWER 36 OF 51 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2001:446670 HCAPLUS
DOCUMENT NUMBER: 135:195403
TITLE: Atropisomerism of the C-1-C'-1 Axis of

2,2',8,8'-Unsubstituted 1,1'-Binaphthyl Derivatives

AUTHOR(S): Chow, Hak-Fun; Wan, Chi-Wai
CORPORATE SOURCE: Department of Chemistry, The Chinese University of Hong Kong, Shatin NT Hong Kong, Peop. Rep. China

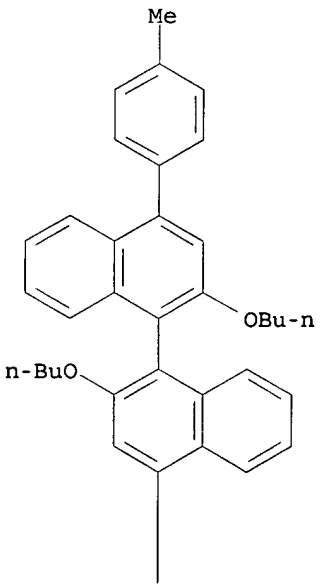
SOURCE: Journal of Organic Chemistry (2001), 66(15), 5042-5047
CODEN: JOCEAH; ISSN: 0022-3263
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English

AB The Suzuki coupling of an optically active (S)-binaphthyl bromide with an (S)-binaphthylboronic acid produced a diastereomeric mixture of tetrahydroxyquaternaphthyls. The coupling products as well as their derivs. can be considered as members of the family of 1,1'-binaphthyl-3,3'-diols. The C-1-C'-1 axis of all these compds. was found to have an unusually high rotational barrier. Generally, the barrier is higher for derivs. having more bulky substituents at the 3 and 3' positions.

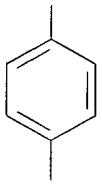
IT **356548-74-8P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and atropisomerism of the C-1-C'-1 axis of 2,2',8,8'-unsubstituted 1,1'-binaphthyl derivs.)

RN 356548-74-8 HCAPLUS
CN 1,1'-Binaphthalene, 2,2'-dibutoxy-4,4'-bis(4-methylphenyl)-, (1S)-(9CI) (CA INDEX NAME)

PAGE 1-A

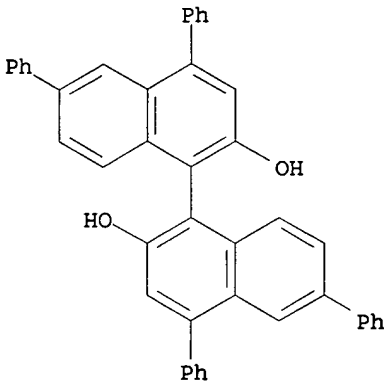


PAGE 2-A



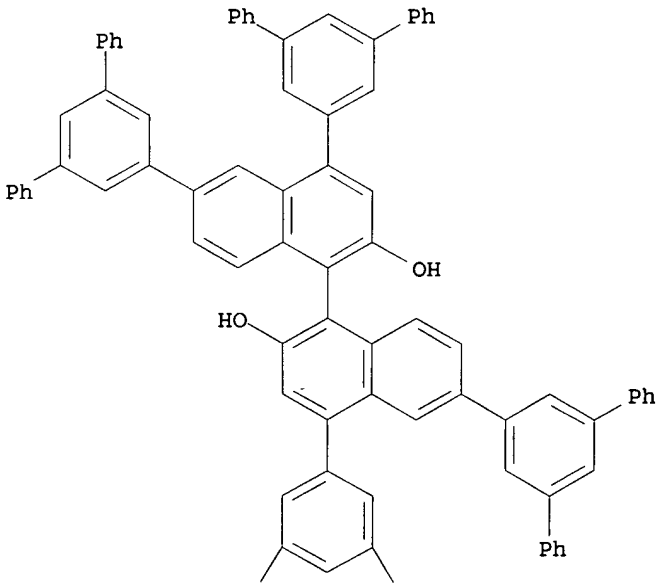

CC 25-24 (Benzene, Its Derivatives, and Condensed Benzenoid Compounds)
IT 356548-71-5P 356548-72-6P **356548-74-8P** 356548-75-9P
356548-77-1P 356548-78-2P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and atropisomerism of the C-1-C'-1 axis of 2,2',8,8'-unsubstituted 1,1'-binaphthyl derivs.)
REFERENCE COUNT: 18 THERE ARE 18 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L54 ANSWER 37 OF 51 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2001:156284 HCAPLUS
DOCUMENT NUMBER: 134:311517
TITLE: Optically Active Dendrimers with a Binaphthyl Core and Phenylene Dendrons: Light Harvesting and Enantioselective Fluorescent Sensing
AUTHOR(S): Gong, Liu-Zhu; Hu, Qiao-Sheng; Pu, Lin
CORPORATE SOURCE: Department of Chemistry, University of Virginia, Charlottesville, VA, 22904-4319, USA
SOURCE: Journal of Organic Chemistry (2001), 66(7), 2358-2367
CODEN: JOCEAH; ISSN: 0022-3263
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Optically active dendrimers containing a 1,1'-binaphthyl core and cross-conjugated phenylene dendrons were synthesized and characterized. The chiral optical properties of these phenylene-based dendrimers are different from the previously reported phenyleneethynylene-based dendrimers probably because of the increased steric interaction between the adjacent phenylene units. UV and fluorescence spectroscopic studies demonstrate that the energy harvested by the periphery of the dendrimers can be efficiently transferred to the more conjugated core, generating much enhanced fluorescence signal at higher generation. The fluorescence of these dendrimers can be quenched both efficiently and enantioselectively by chiral amino alcs. The energy migration and light-harvesting effects of the dendrimers make the higher generation dendrimer more sensitive to fluorescent quenchers than the lower ones. Thus, the dendritic structure provides a signal amplification mechanism. These materials are potentially useful in the enantioselective recognition of chiral organic mols.
IT **335320-65-5P 335320-66-6P**
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(dendritic; light harvesting and enantioselective fluorescent sensing of optically active dendrimers with a binaphthyl core and phenylene dendrons)
RN 335320-65-5 HCAPLUS
CN [1,1'-Binaphthalene]-2,2'-diol, 4,4',6,6'-tetraphenyl-, (1R)- (9CI) (CA INDEX NAME)




RN 335320-66-6 HCAPLUS
CN [1,1'-Binaphthalene]-2,2'-diol, 4,4',6,6'-tetrakis([1,1':3',1''-terphenyl]-5'-yl)-, (1R)- (9CI) (CA INDEX NAME)

PAGE 1-A

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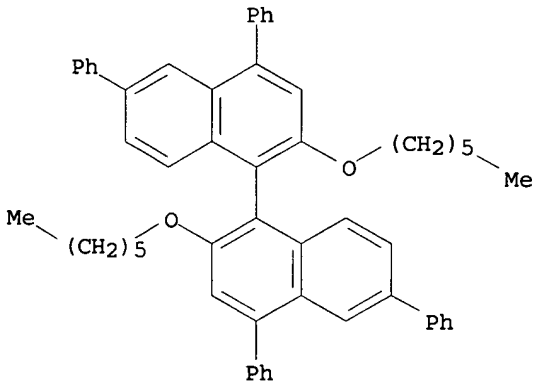
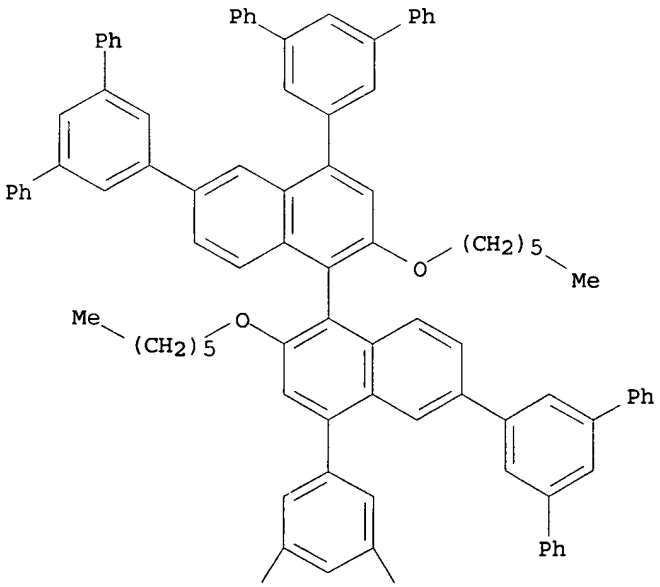
IT **335320-63-3P 335320-64-4P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(dendritic; light harvesting and enantioselective fluorescent sensing of optically active dendrimers with a binaphthyl core and phenylene dendrons)
RN 335320-63-3 HCAPLUS
CN 1,1'-Binaphthalene, 2,2'-bis(hexyloxy)-4,4',6,6'-tetraphenyl-, (1R)- (9CI) (CA INDEX NAME)



RN 335320-64-4 HCAPLUS
CN 1,1'-Binaphthalene, 2,2'-bis(hexyloxy)-4,4',6,6'-tetrakis([1,1':3',1''-terphenyl]-5'-yl)-, (1R)- (9CI) (CA INDEX NAME)

PAGE 1-A



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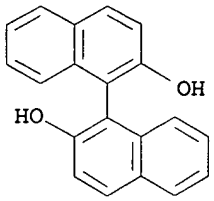
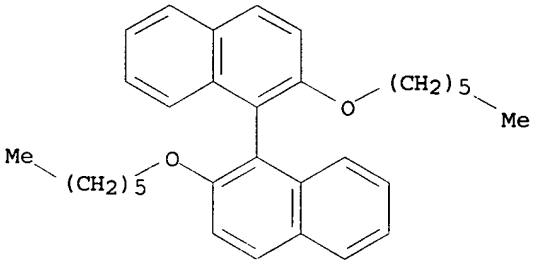
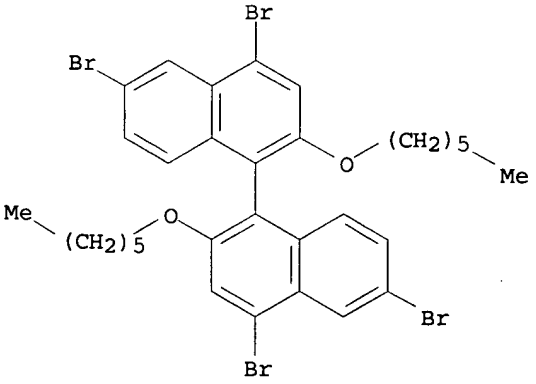
IT **18531-94-7**, (R)-BINOL
RL: RCT (Reactant); RACT (Reactant or reagent)
(light harvesting and enantioselective fluorescent sensing of optically active dendrimers with a binaphthyl core and phenylene dendrons)
RN 18531-94-7 HCAPLUS
CN [1,1'-Binaphthalene]-2,2'-diol, (1R)- (9CI) (CA INDEX NAME)




IT **335320-61-1P 335320-62-2P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(light harvesting and enantioselective fluorescent sensing of optically active dendrimers with a binaphthyl core and phenylene dendrons)
RN 335320-61-1 HCAPLUS
CN 1,1'-Binaphthalene, 2,2'-bis(hexyloxy)-, (1R)- (9CI) (CA INDEX NAME)




RN 335320-62-2 HCAPLUS
CN 1,1'-Binaphthalene, 4,4',6,6'-tetrabromo-2,2'-bis(hexyloxy)-, (1R)- (9CI) (CA INDEX NAME)




CC 35-7 (Chemistry of Synthetic High Polymers)
Section cross-reference(s): 36, 73
IT 335241-44-6P **335320-65-5P 335320-66-6P**
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(dendritic; light harvesting and enantioselective fluorescent sensing of optically active dendrimers with a binaphthyl core and phenylene dendrons)
IT **335320-63-3P 335320-64-4P**

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(dendritic; light harvesting and enantioselective fluorescent sensing of optically active dendrimers with a binaphthyl core and phenylene dendrons)

IT 75-77-4, Trimethylsilyl chloride, reactions 98-80-6, Phenylboronic acid 111-25-1, 1-Bromohexane 626-39-1, 1,3,5-Tribromobenzene **18531-94-7**, (R)-BINOL
RL: RCT (Reactant); RACT (Reactant or reagent)
(light harvesting and enantioselective fluorescent sensing of optically active dendrimers with a binaphthyl core and phenylene dendrons)

IT 17878-23-8P, 3,5-Dibromo-1-trimethylsilylbenzene 128388-54-5P 128388-56-7P **335320-61-1P 335320-62-2P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(light harvesting and enantioselective fluorescent sensing of optically active dendrimers with a binaphthyl core and phenylene dendrons)

REFERENCE COUNT: 63 THERE ARE 63 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

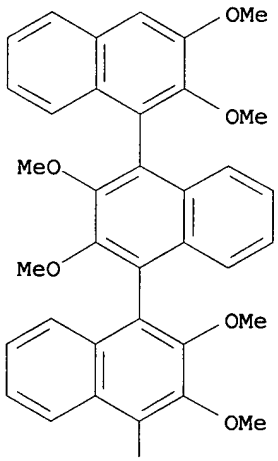
L54 ANSWER 38 OF 51 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2001:122151 HCAPLUS
DOCUMENT NUMBER: 137:201133
TITLE: Synthesis of configurationally defined sexi- and octinaphthalene derivatives. [Erratum to document cited in CA134:207596]
AUTHOR(S): Fuji, Kaoru; Furuta, Takumi; Tanaka, Kiyoshi
CORPORATE SOURCE: Institute for Chemical Research, Kyoto University, Uji Kyoto, 611-0011, Japan
SOURCE: Organic Letters (2001), 3(6), 961-962
CODEN: ORLEF7; ISSN: 1523-7060
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English

AB On pages 170-171, the captions for schemes 1-3 were omitted; the complete schemes are given.

IT **328235-19-4P 328235-27-4P 328235-30-9P 328379-65-3P 328379-67-5P 328379-71-1P**
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(synthesis of configurationally defined sexi- and octinaphthalene derivs. via oxidative coupling reaction of quaternaphthalenes with hydroxynaphthol moiety (Erratum))

RN 328235-19-4 HCAPLUS
CN 1,1':4',1'':4'',1''':4''',1'''':4'''',1''''':4''''',1'''''-Sexinaphthalene, 2,2',2'',2''',2'''',2''''',3,3',3'',3''',3'''',3''''',3'''''-dodecamethoxy-, (1S,1''S,1'''S,1''''S,1'''''S)- (9CI) (CA INDEX NAME)

PAGE 1-A

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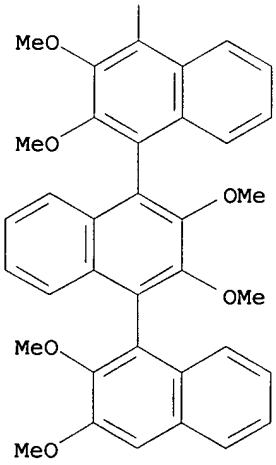


RN 328235-27-4 HCAPLUS
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''''',3,3',3'',3''',3'''',3''''',3'''''',3'''''''-hexadecamethoxy-
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INDEX NAME)

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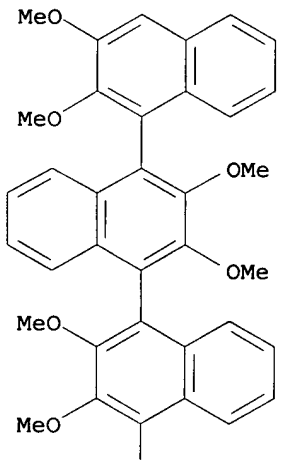


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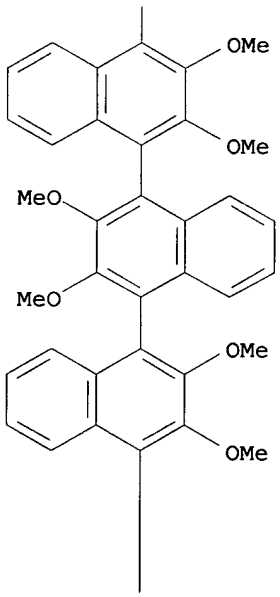

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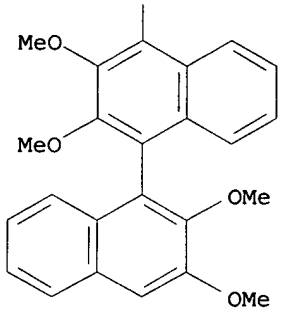


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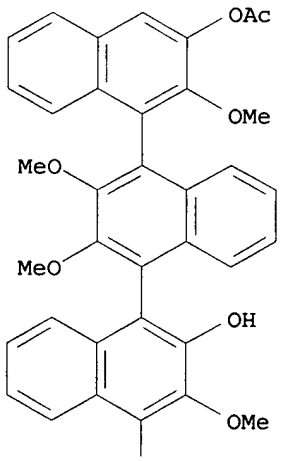

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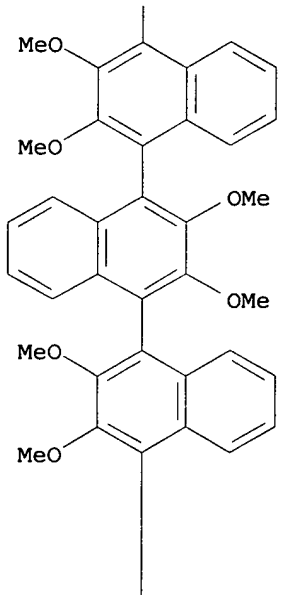


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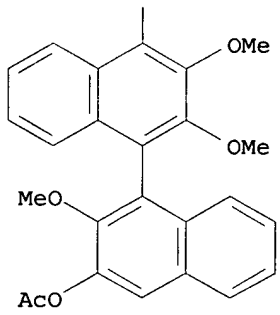


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CN 1,1':4',1'':4'',1''':4''',1'''':4'''',1''''':4''''',1'''''-Sexinaphthalene, 2,2',2'',2''',2'''',2''''',3,3',3'',3''',3'''',3''''',3'''''-dodecamethoxy-, (1S,1''S,1'''R,1''''S,1'''''S)- (9CI) (CA INDEX NAME)

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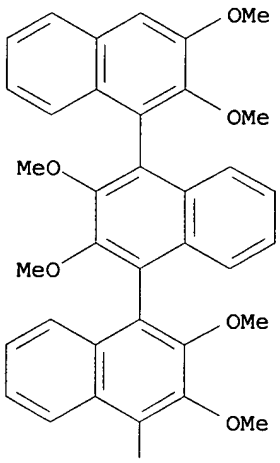


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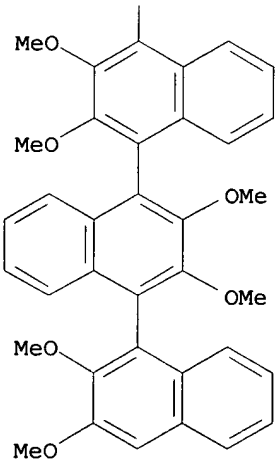


RN 328379-67-5 HCAPLUS
CN [1,1':4',1'':4'',1''':4''',1'''':4'''',1''''':4''''',1'''''-Sexinaphthalene]-3,3'''''-diol, 2,2',2'',2''',2'''',2''''',3',3'',3''',3''''-decamethoxy-, diacetate, (1S,1''R,1'''S,1''''S,1'''''S)- (9CI) (CA INDEX NAME)

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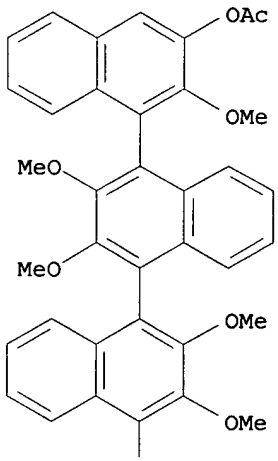


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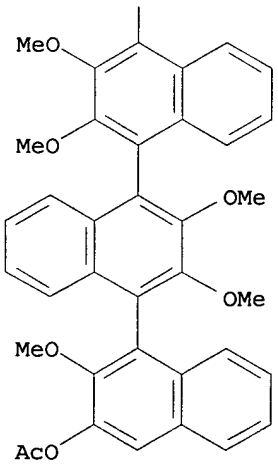


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CN 1,1':4',1'':4'',1''':4''',1'''':4'''',1''''':4''''',1'''''':4''''''
',1'''''''-Octinaphthalene, 2,2',2'',2''',2'''',2''''',2'''''',2''
''''',3,3',3'',3''',3'''',3''''',3'''''',3'''''''-hexadecamethoxy-
, (1S,1''S,1'''S,1''''R,1'''''S,1''''''S,1'''''''S)- (9CI) (CA
INDEX NAME)

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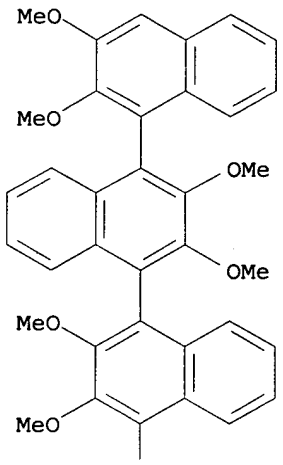


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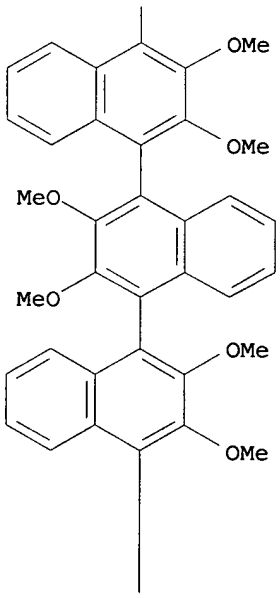

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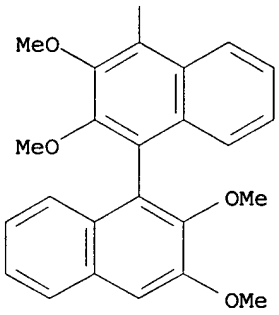


IT **328235-16-1P 328235-17-2P 328235-18-3P**
**328235-20-7P 328235-21-8P 328235-23-0P**
**328235-24-1P 328235-25-2P 328235-26-3P**
**328235-28-5P 328235-29-6P 328379-62-0P**
**328379-63-1P 328379-64-2P 328379-66-4P**
**328379-68-6P 328379-69-7P 328379-70-0P**
**328379-72-2P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(synthesis of configurationally defined sexi- and octinaphthalene derivs. via oxidative coupling reaction of quaternaphthalenes with hydroxynaphthol moiety (Erratum))

RN 328235-16-1 HCAPLUS

CN [1,1':4',1'':4'',1''':4''',1'''':4'''',1'''''-Sexinaphthalene]-2''',3,3'',3''''-tetrol, 2,2',2'',2'''',2''''',3',3''',3''''-octamethoxy-, 3,3'''''-diacetate, (1S,1''S,1'''S,1''''S,1'''''S)-(9CI) (CA INDEX NAME)

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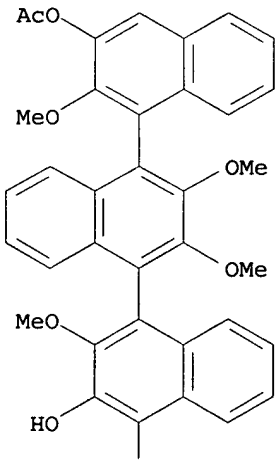

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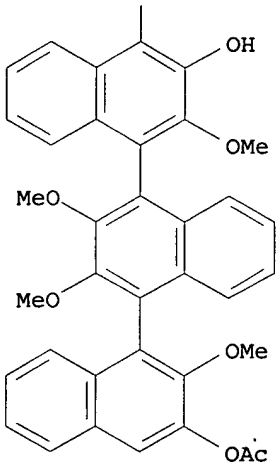


RN 328235-17-2 HCAPLUS
CN [1,1':4',1'':4'',1''':4''',1'''':4'''',1''''':4''''',1'''''-Sexinaphthalene]-3,3'''''-diol, 2,2',2'',2''',2'''',2''''',3',3'',3''',3''''-decamethoxy-, diacetate, (1S,1''S,1'''S,1''''S,1'''''S)- (9CI) (CA INDEX NAME)

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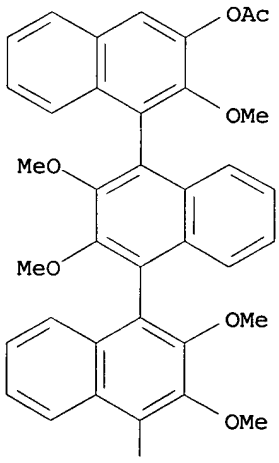

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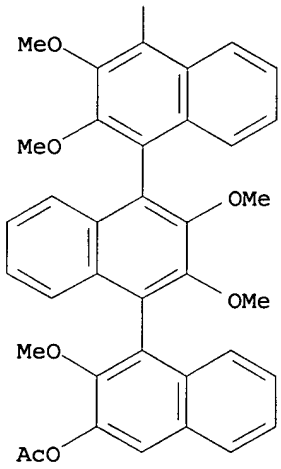


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CN [1,1':4',1'':4'',1''':4''',1'''':4'''',1''''':4''''',1'''''-Sexinaphthalene]-3,3'''''-diol, 2,2',2'',2''',2'''',2''''',3',3'',3''',3''''-decamethoxy-, (1S,1''S,1'''S,1''''S,1'''''S)- (9CI) (CA INDEX NAME)

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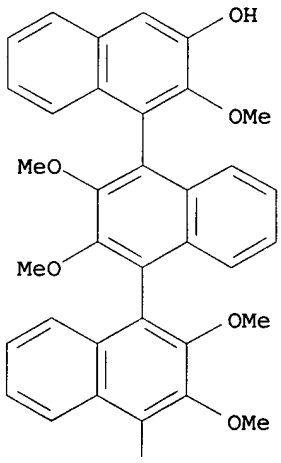

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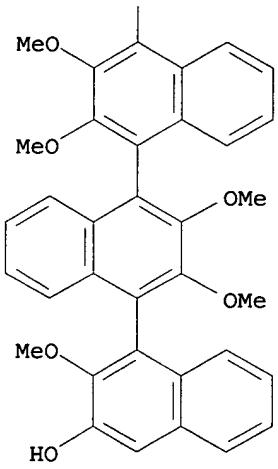


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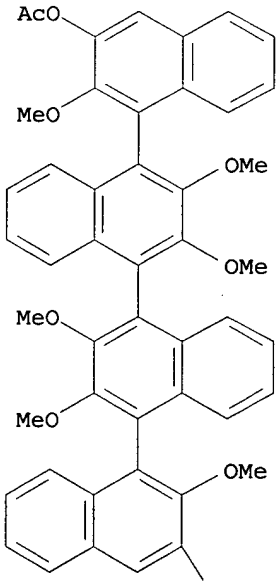


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RN 328235-21-8 HCAPLUS
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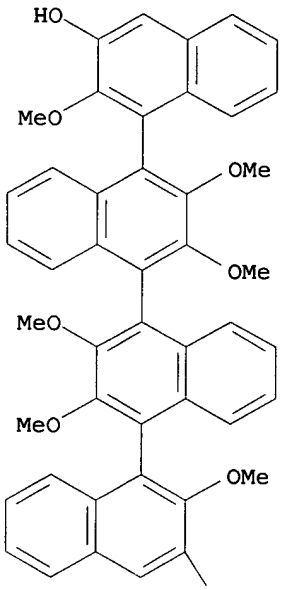


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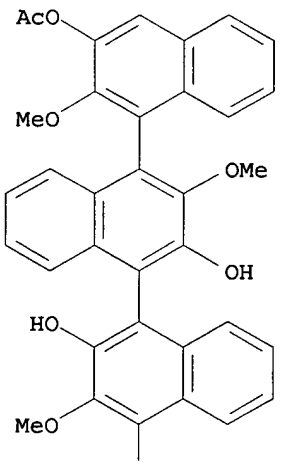


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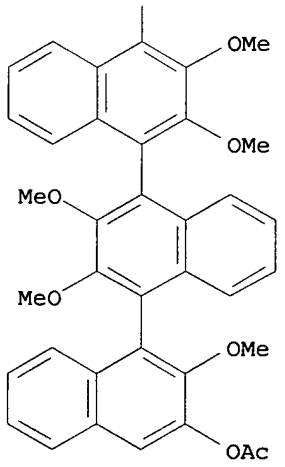


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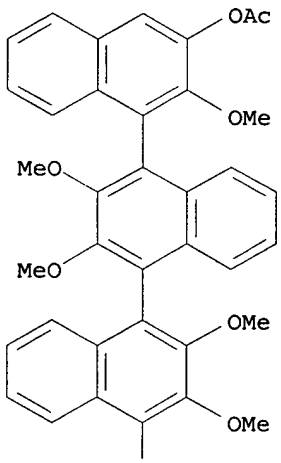


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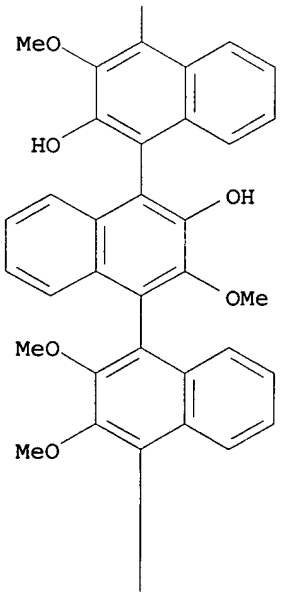

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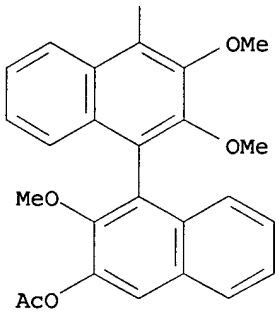


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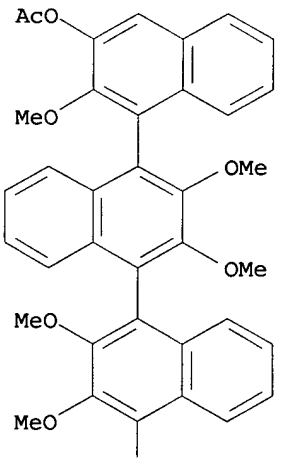

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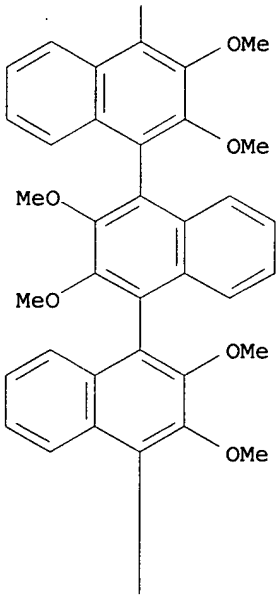


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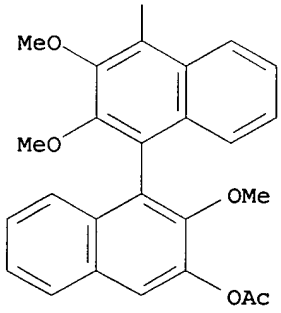


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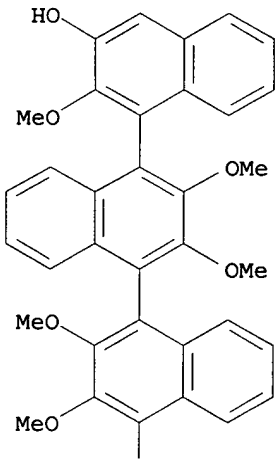


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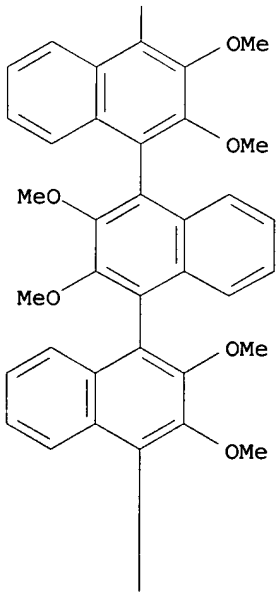

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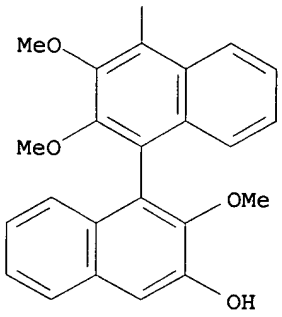


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CN [1,1':4',1'':4'',1''':4''',1'''':4'''',1''''':4''''',1'''''-Sexinaphthalene]-3,3'''''-diol, 2,2',2'',2''',2'''',2''''',3',3'',3''',3''''-decamethoxy-, monoacetate, (1S,1''S,1'''S,1''''S,1'''''S)- (9CI) (CA INDEX NAME)

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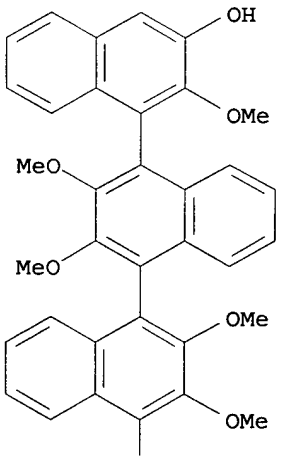

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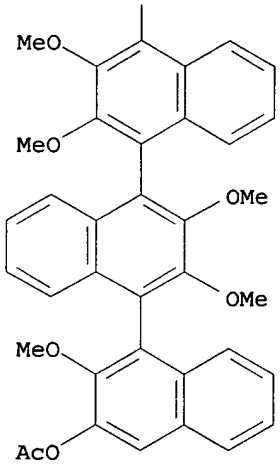


RN 328235-29-6 HCAPLUS
CN [1,1':4',1'':4'',1''':4''',1'''':4'''',1''''':4''''',1'''''':4''''''',1'''''''-Octinaphthalene]-2'',3,3',3'''''''-tetrol, 2,2',2''',2'''',2''''',2'''''',2''''''',3'',3''',3'''',3''''',3'''''',3'''''''-dodecamethoxy-, 3,3'''''''-diacetate, (1S,1''S,1'''S,1''''S,1'''''S,1''''''S,1'''''''S)- (9CI) (CA INDEX NAME)

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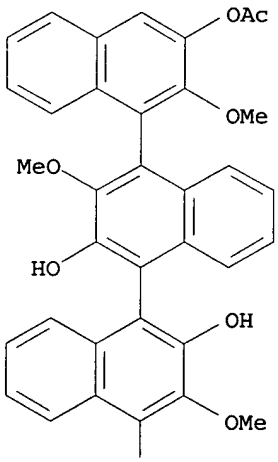

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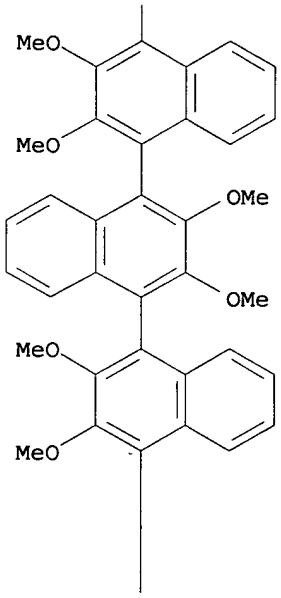


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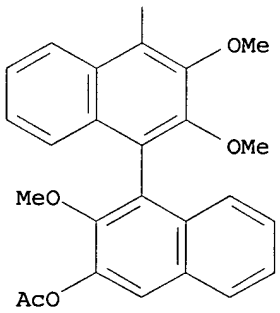


RN 328379-62-0 HCAPLUS
CN [1,1':4',1'':4'',1''':4''',1'''':4'''',1'''''-Sexinaphthalene]-2''',3,3'',3''''-tetrol, 2,2',2'',2'''',2''''',3',3''',3''''-octamethoxy-, 3,3''''-diacetate, (1S,1''S,1'''R,1''''S,1'''''S)-(9CI) (CA INDEX NAME)

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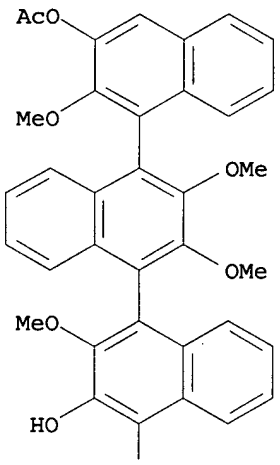


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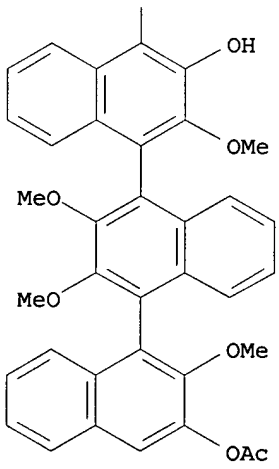


RN 328379-63-1 HCAPLUS
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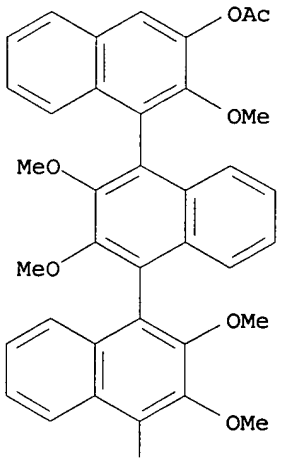


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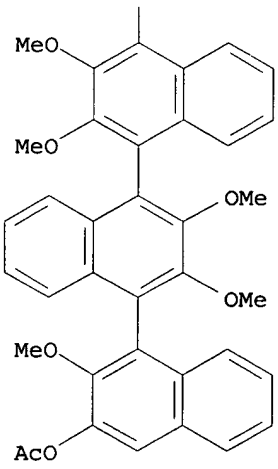


RN 328379-64-2 HCAPLUS
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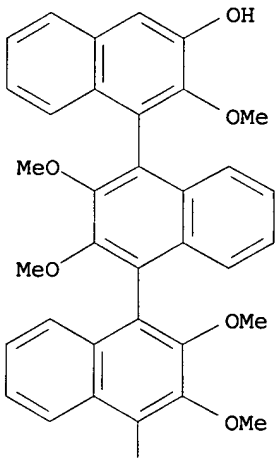


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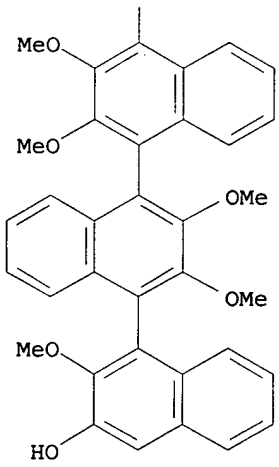


RN 328379-66-4 HCAPLUS
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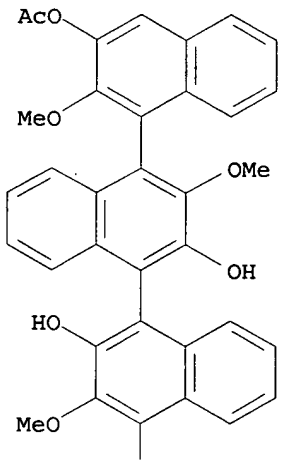


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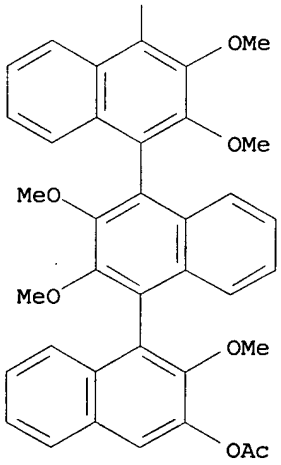


RN 328379-68-6 HCAPLUS
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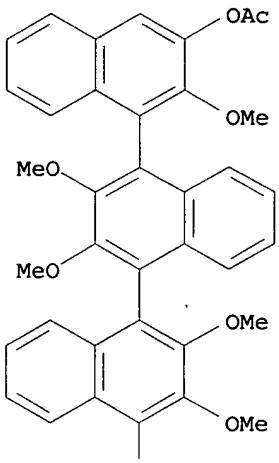


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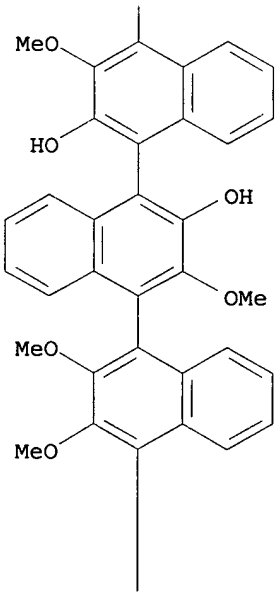

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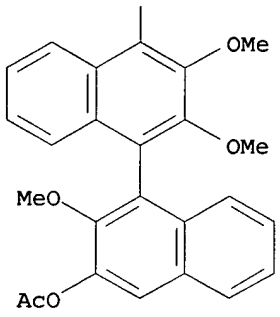


RN 328379-69-7 HCAPLUS
CN [1,1':4',1'':4'',1''':4''',1'''':4'''',1''''':4''''',1'''''':4''''''',1'''''''-Octinaphthalene]-3,3'''''''-diol, 2,2',2'',2''',2'''',2''''',2'''''',2''''''',3',3'',3''',3'''',3''''',3'''''',3''''''-tetradecamethoxy-, diacetate, (1S,1''S,1'''S,1''''R,1'''''S,1''''''S,1'''''''S)- (9CI) (CA INDEX NAME)

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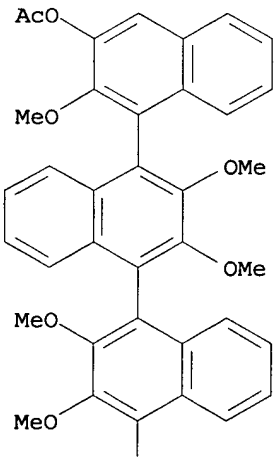

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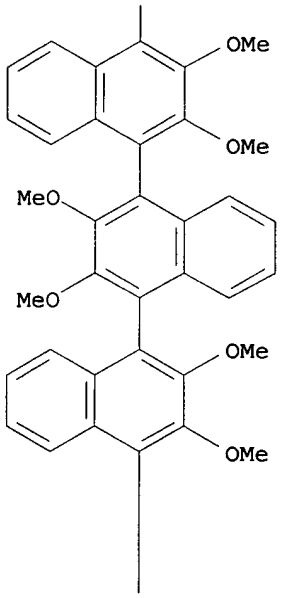


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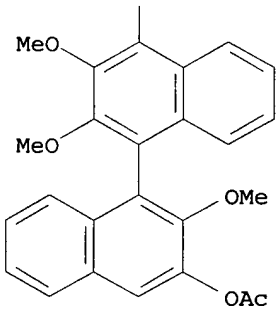


RN 328379-70-0 HCAPLUS
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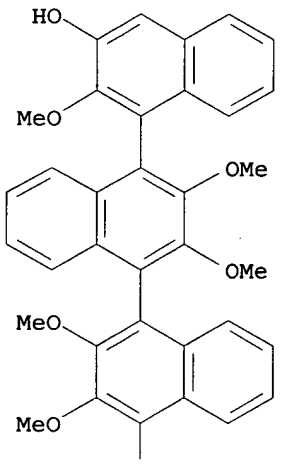


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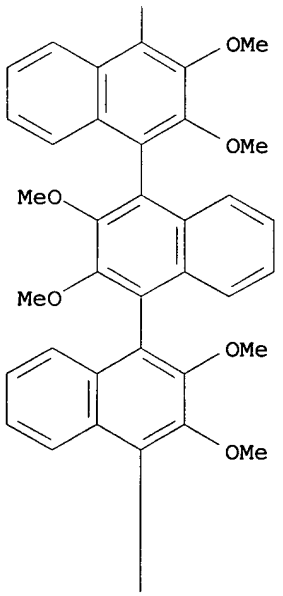

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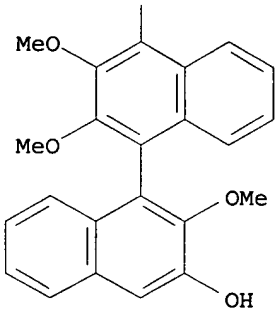


RN 328379-72-2 HCAPLUS
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2,2',2''',2'''',2''''',2'''''',2'''''''',3'',3''',3'''',3''''',3'''
'''-dodecamethoxy-, 3,3'''''''-diacetate,
(1S,1''R,1'''S,1''''S,1'''''S,1''''''S,1'''''''S)- (9CI) (CA
INDEX NAME)

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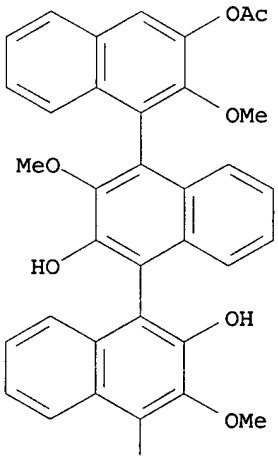

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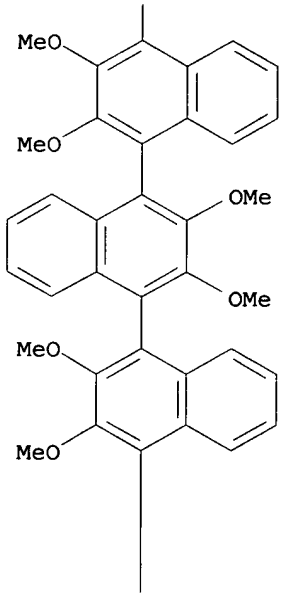


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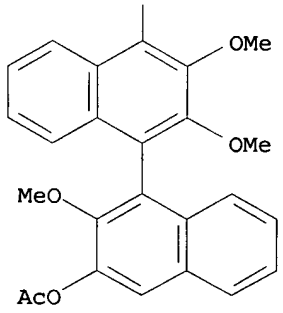


CC 25-24 (Benzene, Its Derivatives, and Condensed Benzenoid Compounds)

IT **328235-19-4P 328235-27-4P 328235-30-9P 328379-65-3P 328379-67-5P 328379-71-1P**
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(synthesis of configurationally defined sexi- and octinaphthalene derivs. via oxidative coupling reaction of quaternaphthalenes with hydroxynaphthol moiety (Erratum))

IT 183015-38-5P 328235-15-0P **328235-16-1P 328235-17-2P 328235-18-3P 328235-20-7P 328235-21-8P 328235-23-0P 328235-24-1P 328235-25-2P 328235-26-3P 328235-28-5P 328235-29-6P 328379-62-0P 328379-63-1P 328379-64-2P 328379-66-4P 328379-68-6P 328379-69-7P 328379-70-0P 328379-72-2P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(synthesis of configurationally defined sexi- and octinaphthalene derivs. via oxidative coupling reaction of quaternaphthalenes with hydroxynaphthol moiety (Erratum))

L54 ANSWER 39 OF 51 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2000:897115 HCAPLUS
DOCUMENT NUMBER: 134:207596
TITLE: Synthesis of Configurationally Defined Sexi- and Octinaphthalene Derivatives
AUTHOR(S): Fuji, Kaoru; Furuta, Takumi; Tanaka, Kiyoshi
CORPORATE SOURCE: Institute for Chemical Research, Kyoto University, Uji Kyoto, 611-0011, Japan
SOURCE: Organic Letters (2001), 3(2), 169-171
CODEN: ORLEF7; ISSN: 1523-7060
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 134:207596

AB Configurationally defined optically active octinaphthalenes were synthesized using the oxidative coupling of optically active quaternaphthalenes with a 2-hydroxynaphthol moiety as a key reaction. The absolute configuration was determined by comparison with products of [6+2] coupling.

IT **328235-19-4P 328235-27-4P 328235-30-9P**
**328379-65-3P 328379-67-5P 328379-71-1P**
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(synthesis of configurationally defined sexi- and octinaphthalene derivs. via oxidative coupling reaction of quaternaphthalenes with hydroxynaphthol moiety)

RN 328235-19-4 HCAPLUS
CN 1,1':4',1'':4'',1''':4''',1'''':4'''',1''''':4''''',1'''''-Sexinaphthalene, 2,2',2'',2''',2'''',2''''',3,3',3'',3''',3'''',3''''',3'''''-dodecamethoxy-, (1S,1''S,1'''S,1''''S,1'''''S)- (9CI) (CA INDEX NAME)

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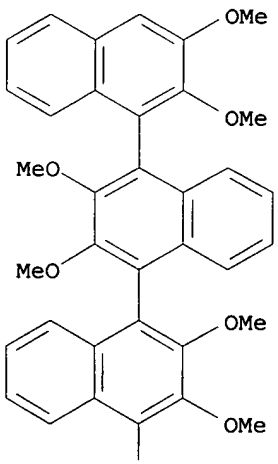

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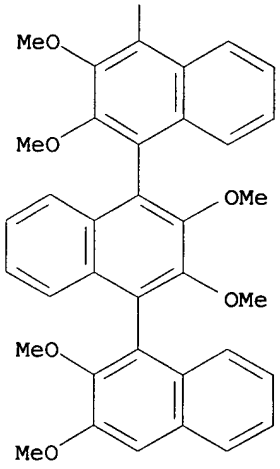


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',1'''''''-Octinaphthalene, 2,2',2'',2''',2'''',2''''',2'''''',2''
''''',3,3',3'',3''',3'''',3''''',3'''''',3''''''-hexadecamethoxy-
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INDEX NAME)

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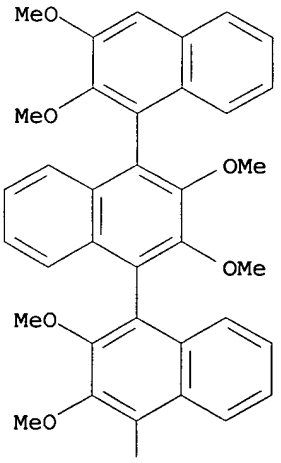

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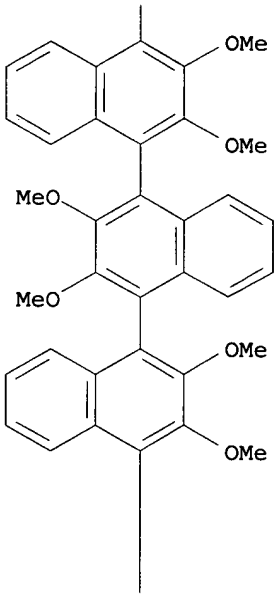


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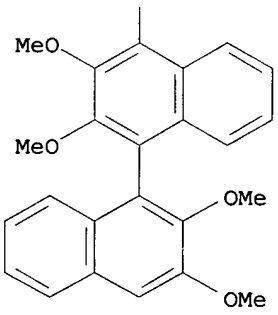


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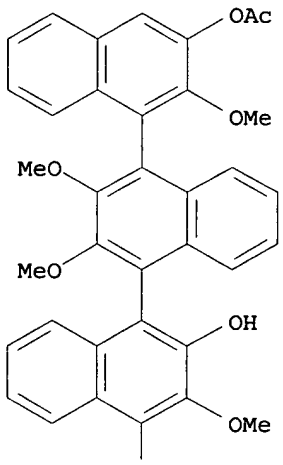


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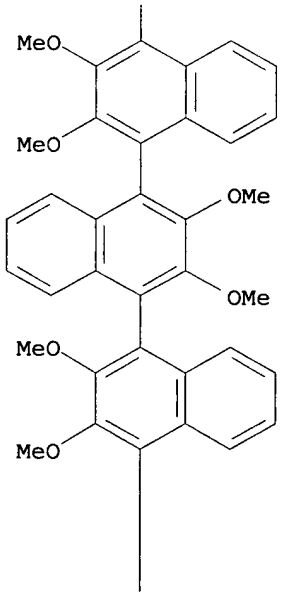

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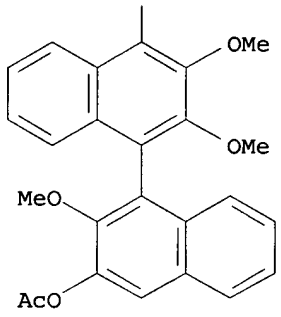


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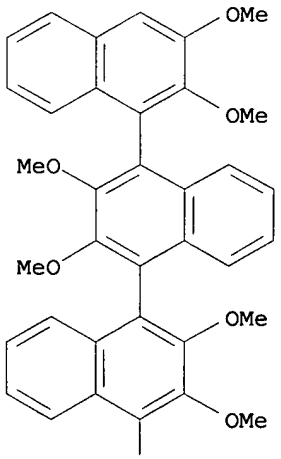

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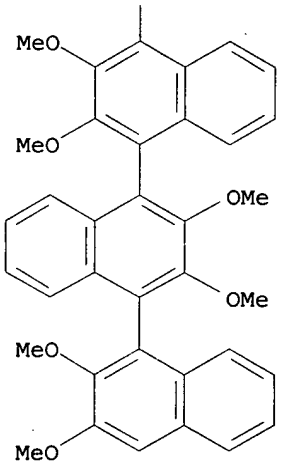


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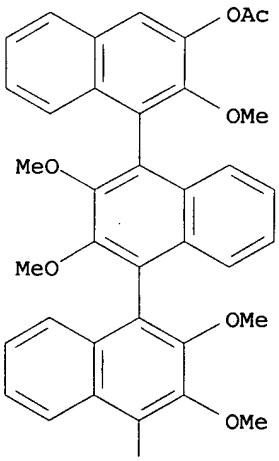

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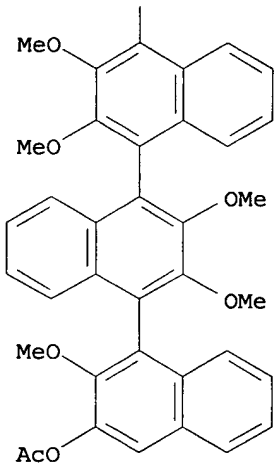


RN 328379-71-1 HCAPLUS
CN 1,1':4',1'':4'',1''':4''',1'''':4'''',1''''':4''''',1'''''':4''''''
',1'''''''-Octinaphthalene, 2,2',2'',2''',2'''',2''''',2'''''',2''
''''',3,3',3'',3''',3'''',3''''',3'''''',3'''''''-hexadecamethoxy-
, (1S,1''S,1'''S,1''''R,1'''''S,1''''''S,1'''''''S)- (9CI) (CA
INDEX NAME)

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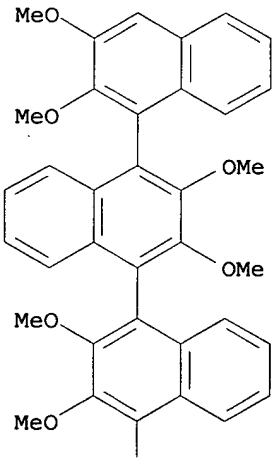

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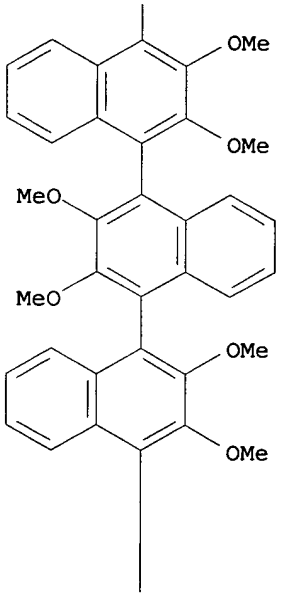


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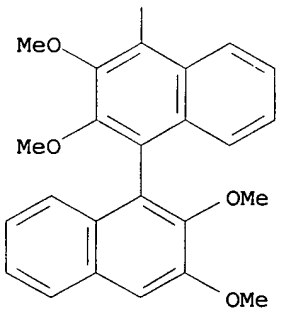


IT **328235-16-1P 328235-17-2P 328235-18-3P**
**328235-20-7P 328235-21-8P 328235-23-0P**
**328235-24-1P 328235-25-2P 328235-26-3P**
**328235-28-5P 328235-29-6P 328379-62-0P**
**328379-63-1P 328379-64-2P 328379-66-4P**
**328379-68-6P 328379-69-7P 328379-70-0P**
**328379-72-2P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(synthesis of configurationally defined sexi- and octinaphthalene derivs. via oxidative coupling reaction of quaternaphthalenes with hydroxynaphthol moiety)

RN 328235-16-1 HCAPLUS

CN [1,1':4',1'':4'',1''':4''',1'''':4'''',1''''':4''''',1'''''-Sexinaphthalene]-2''',3,3'',3''''',3'''''-tetrol, 2,2',2'',2'''',2''''',3',3''',3''''-octamethoxy-, 3,3'''''-diacetate, (1S,1''S,1'''S,1''''S,1'''''S)-(9CI) (CA INDEX NAME)

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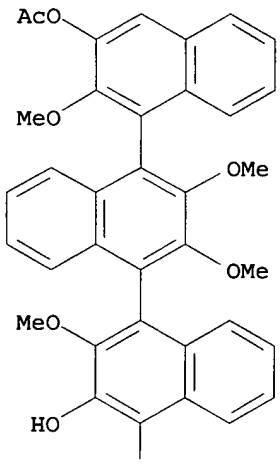


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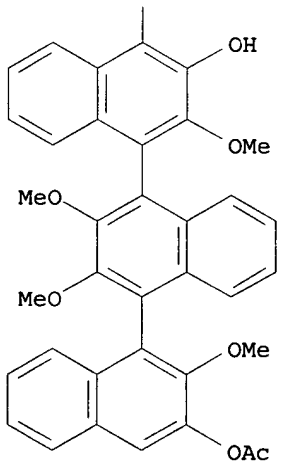


RN 328235-17-2 HCAPLUS
CN [1,1':4',1'':4'',1''':4''',1'''':4'''',1''''':4''''',1'''''-Sexinaphthalene]-3,3'''''-diol, 2,2',2'',2''',2'''',2''''',3',3'',3''',3''''-decamethoxy-, diacetate, (1S,1''S,1'''S,1''''S,1'''''S)- (9CI) (CA INDEX NAME)

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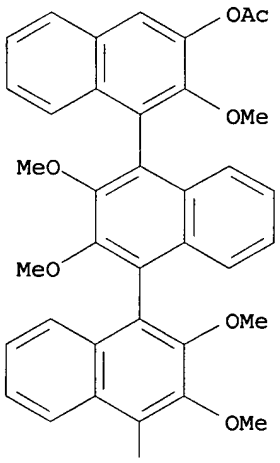


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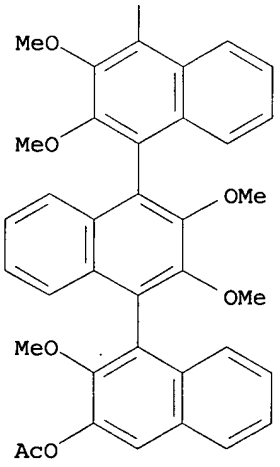


RN 328235-18-3 HCAPLUS
CN [1,1':4',1'':4'',1''':4''',1'''':4'''',1''''':4''''',1'''''-Sexinaphthalene]-3,3'''''-diol, 2,2',2'',2''',2'''',2''''',2''''',3',3'',3''',3''''-decamethoxy-, (1S,1''S,1'''S,1''''S,1'''''S)- (9CI) (CA INDEX NAME)

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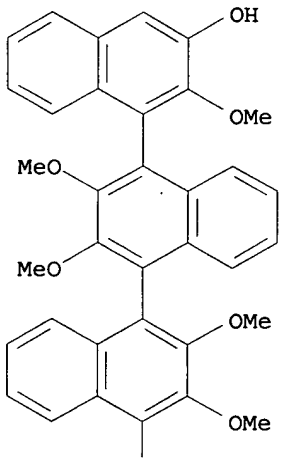


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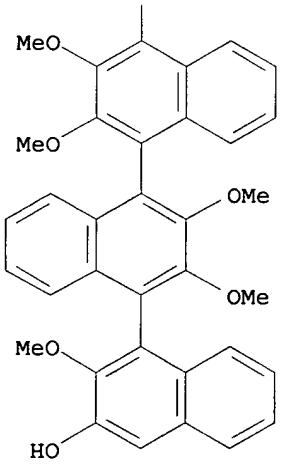


RN 328235-20-7 HCAPLUS
CN [1,1':4',1'':4'',1'''-Quaternaphthalene]-3,3'''-diol, 2,2',2'',2''',3',3''-hexamethoxy-, diacetate, (1S,1''S,1'''S)-(9CI) (CA INDEX NAME)

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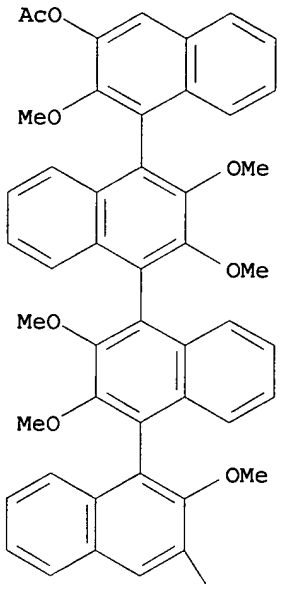


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RN 328235-21-8 HCAPLUS
CN [1,1':4',1'':4'',1'''-Quaternaphthalene]-3,3'''-diol, 2,2',2'',2''',3',3''-hexamethoxy-, monoacetate, (1S,1''S,1'''S)-(9CI) (CA INDEX NAME)

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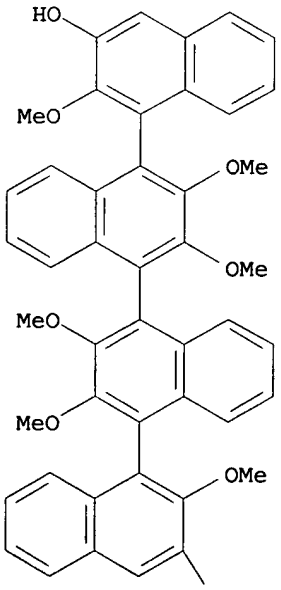

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RN 328235-23-0 HCAPLUS
CN [1,1':4',1'':4'',1''':4''',1'''':4'''',1''''':4''''',1'''''-Sexinaphthalene]-2'',3,3',3'''''-tetrol, 2,2',2''',2'''',2''''',3'',3''',3''''-octamethoxy-, 3,3'''''-diacetate, (1S,1''S,1'''S,1''''S,1'''''S)-(9CI) (CA INDEX NAME)

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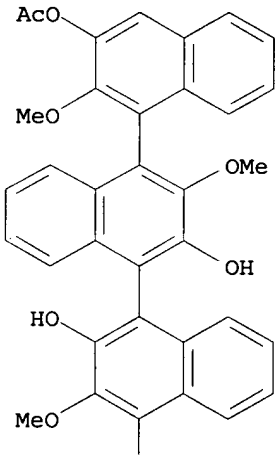


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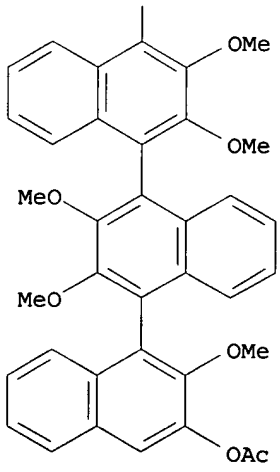

RN 328235-24-1 HCAPLUS
CN [1,1':4',1'':4'',1''':4''',1'''':4'''',1''''':4''''',1'''''':4''''''',1'''''''-Octinaphthalene]-2'''',3,3''',3'''''''-tetrol, 2,2',2'',2''',2'''',2''''',2'''''',2''''''',3',3'',3''',3'''',3''''',3''''''-dodecamethoxy-, 3,3'''''''-diacetate, (1S,1''S,1'''S,1''''S,1'''''S,1''''''S,1'''''''S)- (9CI) (CA INDEX NAME)

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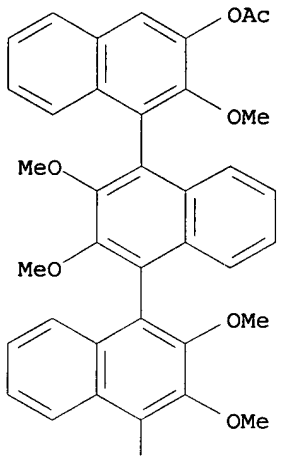


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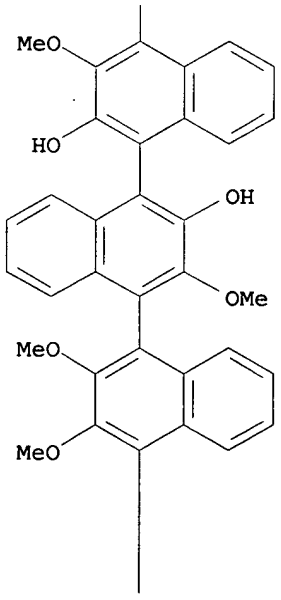

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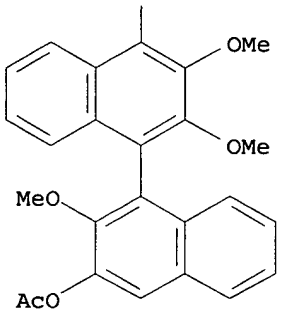


RN 328235-25-2 HCAPLUS
CN [1,1':4',1'':4'',1''':4''',1'''':4'''',1''''':4''''',1'''''':4''''''',1'''''''-Octinaphthalene]-3,3'''''''-diol, 2,2',2'',2''',2'''',2''''',2'''''',2''''''',3',3'',3''',3'''',3''''',3'''''''-tetradecamethoxy-, diacetate, (1S,1''S,1'''S,1''''S,1'''''S,1''''''S,1'''''''S)- (9CI) (CA INDEX NAME)

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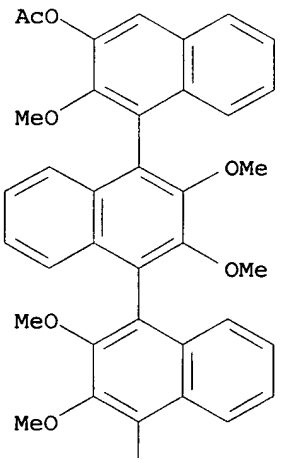

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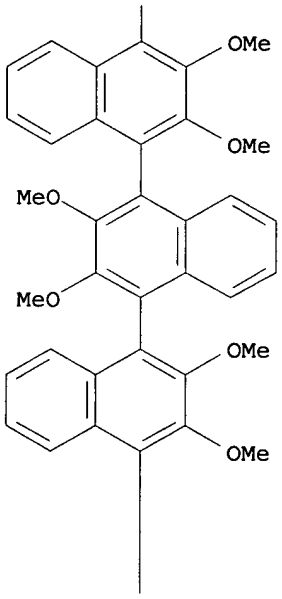


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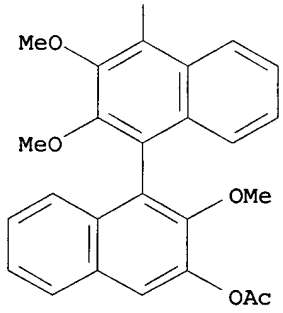


RN 328235-26-3 HCAPLUS
CN [1,1':4',1'':4'',1''':4''',1'''':4'''',1''''':4''''',1'''''':4''''''-Octinaphthalene]-3,3''''''-diol, 2,2',2'',2''',2'''',2''''',2'''''',2''''''',3',3'',3''',3'''',3''''',3''''''-tetradecamethoxy-, (1S,1''S,1'''S,1''''S,1'''''S,1''''''S,1'''''''S)- (9CI) (CA INDEX NAME)

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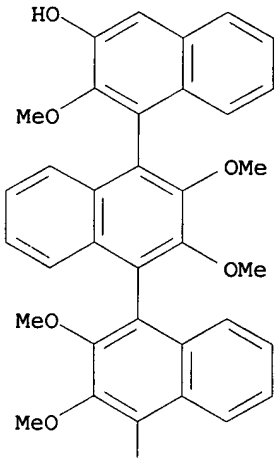


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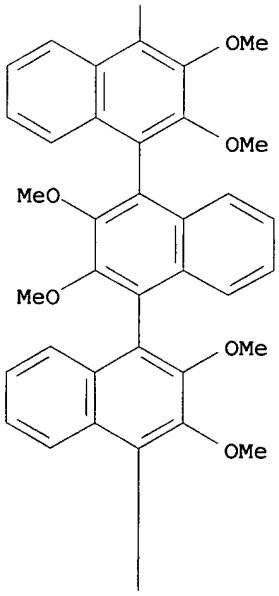

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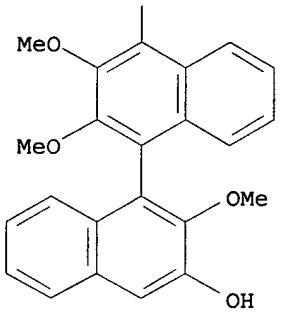


RN 328235-28-5 HCAPLUS
CN [1,1':4',1'':4'',1''':4''',1'''':4'''',1''''':4''''',1'''''-Sexinaphthalene]-3,3'''''-diol, 2,2',2'',2''',2'''',2''''',3',3'',3''',3''''-decamethoxy-, monoacetate, (1S,1''S,1'''S,1''''S,1'''''S)- (9CI) (CA INDEX NAME)

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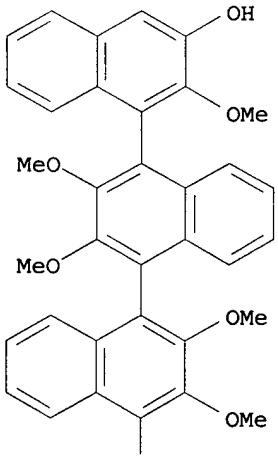

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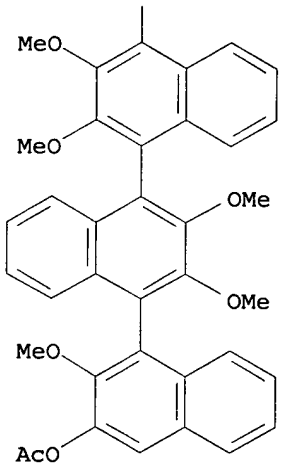


RN 328235-29-6 HCAPLUS
CN [1,1':4',1'':4'',1''':4''',1'''':4'''',1''''':4''''',1'''''':4''''''',1'''''''-Octinaphthalene]-2'',3,3',3'''''''-tetrol, 2,2',2''',2'''',2''''',2'''''',2''''''',3'',3''',3'''',3''''',3''''''-dodecamethoxy-, 3,3'''''''-diacetate, (1S,1''S,1'''S,1''''S,1'''''S,1''''''S,1'''''''S)- (9CI) (CA INDEX NAME)

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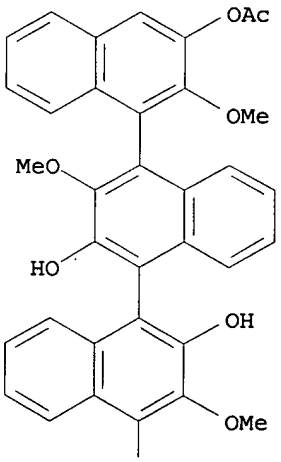

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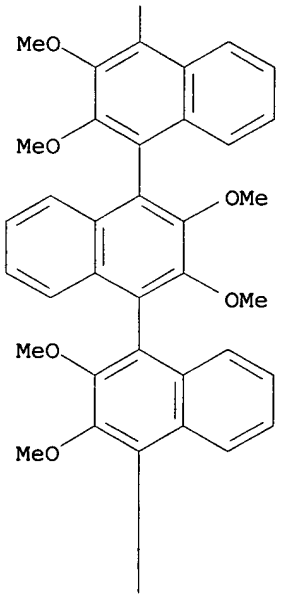


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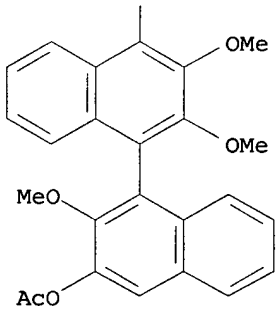


RN 328379-62-0 HCAPLUS
CN [1,1':4',1'':4'',1''':4''',1'''':4'''',1''''':4''''',1'''''-Sexinaphthalene]-2''',3,3'',3''''',3'''''-tetrol, 2,2',2'',2'''',2''''',3',3''',3''''-octamethoxy-, 3,3'''''-diacetate, (1S,1''S,1'''R,1''''S,1'''''S)-(9CI) (CA INDEX NAME)

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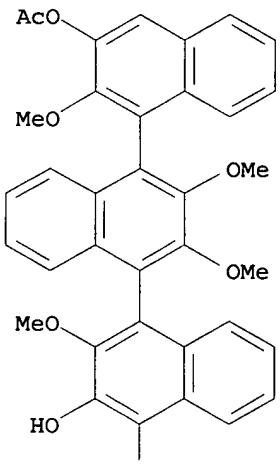


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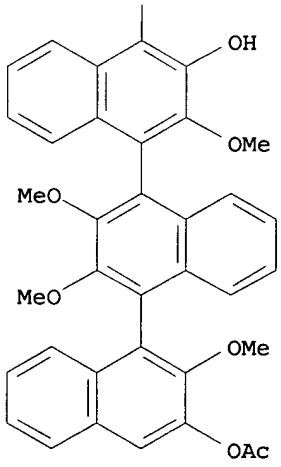


RN 328379-63-1 HCAPLUS
CN [1,1':4',1'':4'',1''':4''',1'''':4'''',1''''':4''''',1'''''-Sexinaphthalene]-3,3'''''-diol, 2,2',2'',2''',2'''',2''''',2'''''',3',3'',3''',3''''-decamethoxy-, diacetate, (1S,1''S,1'''R,1''''S,1'''''S)- (9CI) (CA INDEX NAME)

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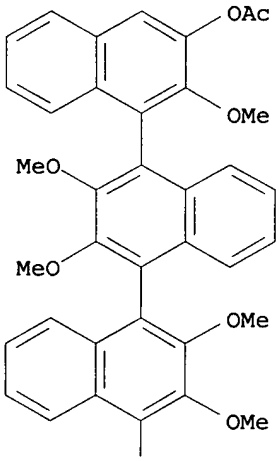


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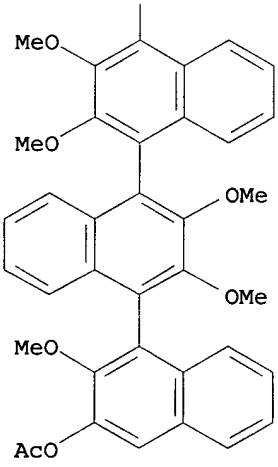


RN 328379-64-2 HCAPLUS
CN [1,1':4',1'':4'',1''':4''',1'''':4'''',1''''':4''''',1'''''-Sexinaphthalene]-3,3'''''-diol, 2,2',2'',2''',2'''',2''''',3',3'',3''',3''''-decamethoxy-, (1S,1''S,1'''R,1''''S,1'''''S)- (9CI) (CA INDEX NAME)

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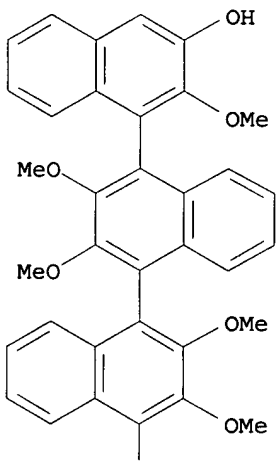


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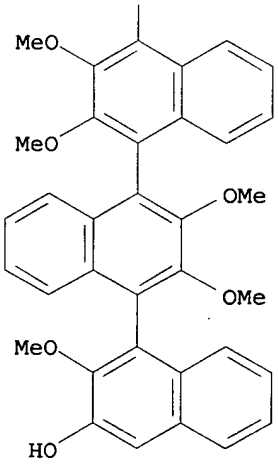


RN 328379-66-4 HCAPLUS
CN [1,1':4',1'':4'',1''':4''',1'''':4'''',1''''':4''''',1'''''-Sexinaphthalene]-2'',3,3',3'''''-tetrol, 2,2',2''',2'''',2''''',3'',3''',3''''-octamethoxy-, 3,3'''''-diacetate, (1S,1''R,1'''S,1''''S,1'''''S)-(9CI) (CA INDEX NAME)

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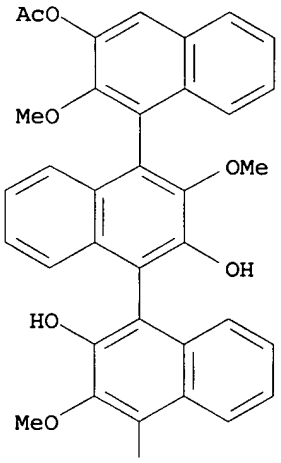


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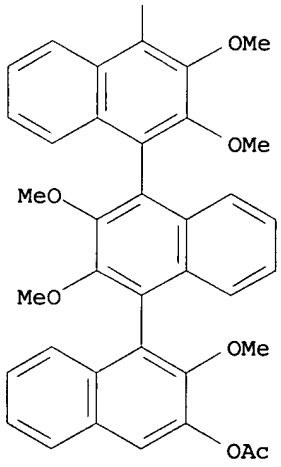


RN 328379-68-6 HCAPLUS
CN [1,1':4',1'':4'',1''':4''',1'''':4'''',1''''':4''''',1'''''':4''''''',1'''''''-Octinaphthalene]-2'''',3,3''',3'''''''-tetrol, 2,2',2'',2''',2''''',2'''''',2''''''',3',3'',3''',3''''',3'''''',3'''''''-dodecamethoxy-, 3,3'''''''-diacetate, (1S,1''S,1'''S,1''''R,1'''''S,1''''''S,1'''''''S)- (9CI) (CA INDEX NAME)

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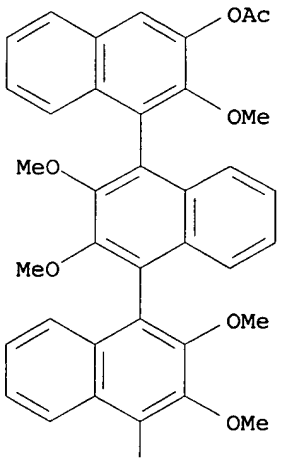


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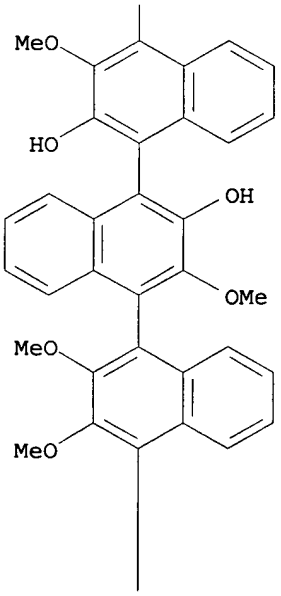
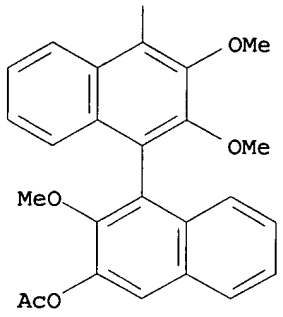
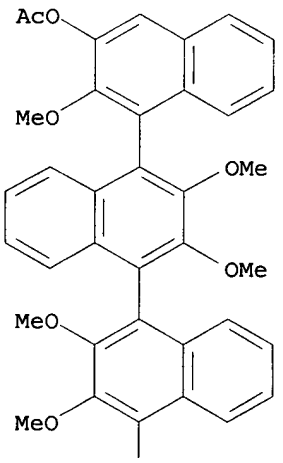


PAGE 3-A

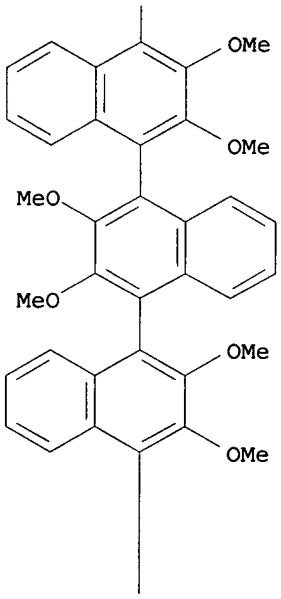



RN 328379-69-7 HCAPLUS
CN [1,1':4',1'':4'',1''':4''',1'''':4'''',1''''':4''''',1'''''':4''''''',1'''''''-Octinaphthalene]-3,3'''''''-diol, 2,2',2'',2''',2'''',2''''',2'''''',2''''''',3',3'',3''',3'''',3''''',3'''''''-tetradecamethoxy-, diacetate, (1S,1''S,1'''S,1''''R,1'''''S,1''''''S,1'''''''S)- (9CI) (CA INDEX NAME)

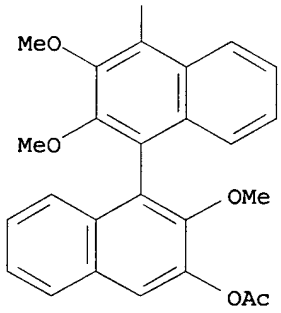
PAGE 1-A



PAGE 2-A

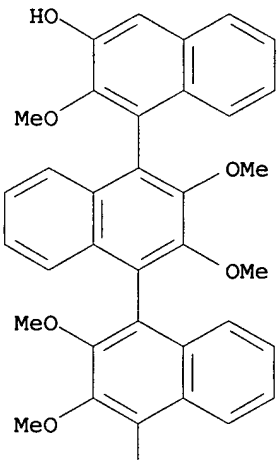



PAGE 3-A

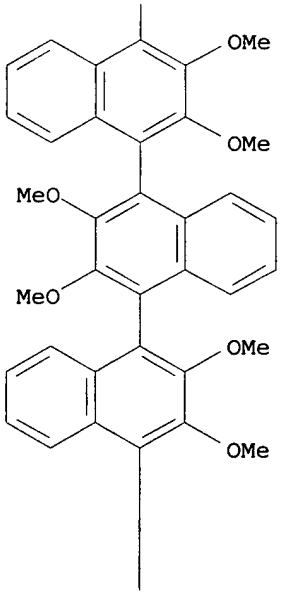



RN 328379-70-0 HCAPLUS
CN [1,1':4',1'':4'',1''':4''',1'''':4'''',1''''':4''''',1'''''':4''''''-Octinaphthalene]-3,3''''''-diol, 2,2',2'',2''',2'''',2''''',2'''''',2''''''',3',3'',3''',3'''',3''''',3''''''-tetradecamethoxy-, (1S,1''S,1'''S,1''''R,1'''''S,1''''''S)- (9CI) (CA INDEX NAME)

PAGE 1-A




PAGE 2-A



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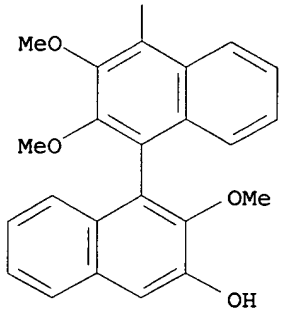
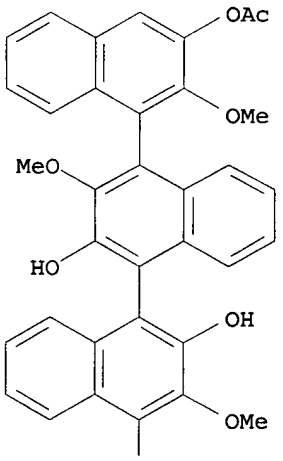
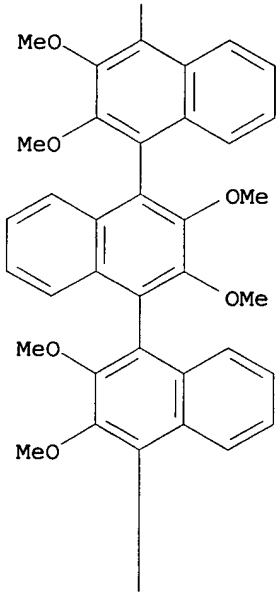



RN 328379-72-2 HCAPLUS
CN [1,1':4',1'':4'',1''':4''',1'''':4'''',1''''':4''''',1'''''':4''''''',1'''''''-Octinaphthalene]-2'',3,3',3'''''''-tetrol, 2,2',2''',2'''',2''''',2'''''',2''''''',3'',3''',3'''',3''''',3''''''-dodecamethoxy-, 3,3'''''''-diacetate, (1S,1''R,1'''S,1''''S,1'''''S,1''''''S,1'''''''S)- (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 2-A

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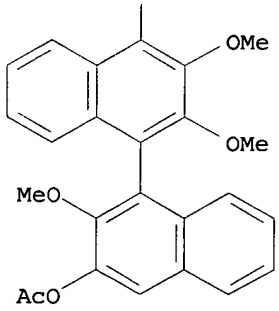


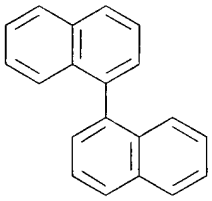

CC 25-24 (Benzene, Its Derivatives, and Condensed Benzenoid Compounds)

IT **328235-19-4P 328235-27-4P 328235-30-9P 328379-65-3P 328379-67-5P 328379-71-1P**
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(synthesis of configurationally defined sexi- and octinaphthalene derivs. via oxidative coupling reaction of quaternaphthalenes with hydroxynaphthol moiety)

IT 183015-38-5P 328235-15-0P **328235-16-1P 328235-17-2P 328235-18-3P 328235-20-7P 328235-21-8P 328235-23-0P 328235-24-1P 328235-25-2P 328235-26-3P 328235-28-5P 328235-29-6P 328379-62-0P 328379-63-1P 328379-64-2P 328379-66-4P 328379-68-6P 328379-69-7P 328379-70-0P 328379-72-2P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(synthesis of configurationally defined sexi- and octinaphthalene derivs. via oxidative coupling reaction of quaternaphthalenes with hydroxynaphthol moiety)

REFERENCE COUNT: 22 THERE ARE 22 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L54 ANSWER 40 OF 51 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2000:819794 HCAPLUS
DOCUMENT NUMBER: 134:71918
TITLE: Synthesis and application of chiral conjugated polymers and dendrimers
AUTHOR(S): Pu, Lin
CORPORATE SOURCE: Department of Chemistry, University of Virginia, Charlottesville, VA, 22901, USA
SOURCE: Materials Research Society Symposium Proceedings (2000), 598(Electrical, Optical, and Magnetic Properties of Organic Solid-State Materials V), BB5.3/1-BB5.3/4
CODEN: MRSPDH; ISSN: 0272-9172
PUBLISHER: Materials Research Society
DOCUMENT TYPE: Journal; General Review
LANGUAGE: English
AB A review with 11 refs. 1,1'-Binaphthyl-based chiral polymers and dendrimers have been synthesized and their potential applications have been explored. These materials have shown a variety of interesting properties such as **electroluminescence**, optical nonlinearity, enantioselective catalysis and chiral sensing.
IT **604-53-5DP**, 1,1'-Binaphthyl, derivs., polymers
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(synthesis and application of chiral conjugated polymers and dendrimers)
RN 604-53-5 HCAPLUS
CN 1,1'-Binaphthalene (9CI) (CA INDEX NAME)



CC 35-0 (Chemistry of Synthetic High Polymers)
Section cross-reference(s): 36, **73**, 76
ST binaphthyl chiral dendrimer synthesis **electroluminescence** nonlinear optical property review
IT Luminescence, **electroluminescence**
Nonlinear optical susceptibility
(second-order; synthesis and application of chiral conjugated polymers and dendrimers)
IT **604-53-5DP**, 1,1'-Binaphthyl, derivs., polymers
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(synthesis and application of chiral conjugated polymers and dendrimers)
REFERENCE COUNT: 17 THERE ARE 17 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L54 ANSWER 41 OF 51 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2000:655691 HCAPLUS
DOCUMENT NUMBER: 133:335470
TITLE: Novel chiral conjugated macromolecules for

potential electrical and optical applications

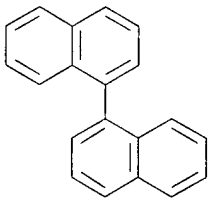
AUTHOR(S): Pu, Lin
CORPORATE SOURCE: Department of Chemistry, University of Virginia, Charlottesville, VA, 22901, USA

SOURCE: Macromolecular Rapid Communications (2000), 21(12), 795-809
CODEN: MRCOE3; ISSN: 1022-1336
PUBLISHER: Wiley-VCH Verlag GmbH
DOCUMENT TYPE: Journal; General Review
LANGUAGE: English

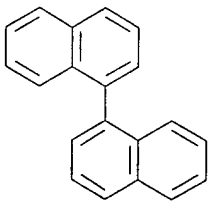
X alkoxy hydroxy 8 pos.

AB A review, with 75 refs., on optically active 1,1'-binaphthyl mols. as the basis of chiral dendrimers and linear polymers, e.g., polyacetylenes, poly(arylene ethynylene)s, binaphthyl conjugated polymers with crown ether receptors, binaphthyl-polythiophenes, propeller-like binaphthyl polymers with alkylamino donors, etc. The dendrimers show efficient light harvesting effects and enantioselective fluorescence response in the presence of chiral amino alc. quenchers. The dendrimers are potentially useful as fluorescent sensors for recognition of chiral organic compds. Linear binaphthyl polymers show strong **light emitting** properties and colors of emission can be systematically tuned by incorporating linkers of various conjugation length. Efficient **light emitting** diodes can be fabricated using binaphthyl-based conjugated polymers. Nonlinear optical chromophores organize in the chiral binaphthyl polymer chains to construct noncentrosym. and multipolar materials. These novel propeller-like polymers have shown significant second-order nonlinear optical effects.

IT **604-53-5D**, 1,1'-Binaphthyl, polymers
RL: PRP (Properties)
(chiral conjugated dendrimers and polymers based on binaphthyl derivs. for fluorescent sensors for chiral recognition and for **LEDs**)
RN 604-53-5 HCAPLUS
CN 1,1'-Binaphthalene (9CI) (CA INDEX NAME)



IT **604-53-5**, 1,1'-Binaphthyl
RL: PRP (Properties)
(core; chiral conjugated dendrimers and polymers based on binaphthyl derivs. for fluorescent sensors for chiral recognition and for **LEDs**)
RN 604-53-5 HCAPLUS
CN 1,1'-Binaphthalene (9CI) (CA INDEX NAME)



CC 35-0 (Chemistry of Synthetic High Polymers)
Section cross-reference(s): 36, **73**
IT Dendritic polymers
RL: PRP (Properties)
(binaphthyl-based; chiral conjugated dendrimers and polymers based on binaphthyl derivs. for fluorescent sensors for chiral recognition and for **LEDs**)
IT Chiral recognition
Fluorescence
Nonlinear optical materials
Polymer chains
(chiral conjugated dendrimers and polymers based on binaphthyl derivs. for fluorescent sensors for chiral recognition and for **LEDs**)
IT Polymers, properties
RL: PRP (Properties)
(conjugated, binaphthyl-containing; chiral conjugated dendrimers and polymers based on binaphthyl derivs. for fluorescent sensors for chiral recognition and for **LEDs**)
IT Polyacetylenes, properties
RL: PRP (Properties)
(polyarylene-, binaphthyl-containing; chiral conjugated dendrimers and polymers based on binaphthyl derivs. for fluorescent sensors for chiral recognition and for **LEDs**)
IT Polymers, properties
RL: PRP (Properties)
(polythiophenes, binaphthyl-containing; chiral conjugated dendrimers and polymers based on binaphthyl derivs. for fluorescent sensors for chiral recognition and for **LEDs**)
IT **604-53-5D**, 1,1'-Binaphthyl, polymers
RL: PRP (Properties)
(chiral conjugated dendrimers and polymers based on binaphthyl derivs. for fluorescent sensors for chiral recognition and for **LEDs**)
IT **604-53-5**, 1,1'-Binaphthyl
RL: PRP (Properties)
(core; chiral conjugated dendrimers and polymers based on binaphthyl derivs. for fluorescent sensors for chiral recognition and for **LEDs**)
REFERENCE COUNT: 75 THERE ARE 75 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

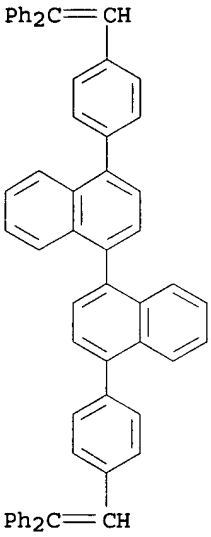
L54 ANSWER 42 OF 51 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2000:511898 HCAPLUS
DOCUMENT NUMBER: 133:142424
TITLE: Organic **electroluminescence** devices and manufacture
INVENTOR(S): Azuma, Hisahiro; Sakai, Toshio; Fukuoka, Kenichi; Hosokawa, Chishio
PATENT ASSIGNEE(S): Idemitsu Kosan Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 43 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| JP 2000208264 | A2 | 20000728 | JP 1999-10659 | 1999 0119 |

PRIORITY APPLN. INFO.: JP 1999-10659

1999
0119

OTHER SOURCE(S): MARPAT 133:142424
AB The devices comprise a phosphor and/or a crystallization inhibitor (energy gaps Eg1 and Eg2, resp.) containing XYC:HCArCH:CXY (X, Y = C6-50 aryl; C3-50 monovalent heterocyclic; Ar = C6-80 arylene; divalent triphenylamine; C3-80 divalent heterocyclic), where Eg1 > Eg2 - 0.1 eV.
IT **186412-20-4**
RL: DEV (Device component use); USES (Uses)
(organic **electroluminescence** devices and manufacture)
RN 186412-20-4 HCAPLUS
CN 1,1'-Binaphthalene, 4,4'-bis[4-(2,2-diphenylethenyl)phenyl]- (9CI) (CA INDEX NAME)




IC ICM H05B033-14
ICS C09K011-06; H05B033-10
CC 73-5 (**Optical**, Electron, and Mass Spectroscopy and Other Related Properties)
ST org **electroluminescence** device phosphor crystn inhibitor
IT Band gap
Crystallization
**Electroluminescent** devices
**Luminescent** substances
(**organic electroluminescence** devices and manufacture)
IT 2085-33-8, Tris(8-quinolinolato)aluminum 123847-85-8
124729-98-2 125643-81-4 142289-08-5 144810-08-2
186259-51-8 186412-15-7 186412-19-1 **186412-20-4**
213527-39-0 286369-15-1 286369-16-2 286369-17-3
286369-18-4 286369-19-5
RL: DEV (Device component use); USES (Uses)
(organic **electroluminescence** devices and manufacture)

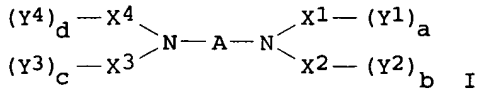
L54 ANSWER 43 OF 51 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2000:457176 HCAPLUS
DOCUMENT NUMBER: 133:81385
TITLE: Organic **electroluminescent** devices
INVENTOR(S): Hosokawa, Chishio; Funehashi, Masakazu; Kawamura, Hisayuki; Arai, Hiromasa; Koga, Hidetoshi; Ikeda, Hidetsugu

PATENT ASSIGNEE(S): Idemitsu Kosan Co., Ltd., Japan
SOURCE: PCT Int. Appl., 167 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| WO 2000039247 | A1 | 20000706 | WO 1999-JP7390 | 1999 1228 |
| W: CN, KR, US<br>RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE | | | | |
| JP 2001052868 | A2 | 20010223 | JP 1999-223056 | 1999 0805 |
| JP 2001131541 | A2 | 20010515 | JP 1999-347848 | 1999 1207 |
| EP 1061112 | A1 | 20001220 | EP 1999-961465 | 1999 1228 |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI | | | | |
| US 6743948 | B1 | 20040601 | US 2000-623057 | 2000 0825 |
| US 2003072966 | A1 | 20030417 | US 2002-179179 | 2002 0626 |
| US 6951693 | B2 | 20051004 | | |
| US 2005038296 | A1 | 20050217 | US 2004-814121 | 2004 0401 |

| | | | |
|---|---|---|---|
| PRIORITY APPLN. INFO.: | JP 1998-373921 | A | 1998 1228 |
| | JP 1999-140103 | A | 1999 0520 |
| | JP 1999-223056 | A | 1999 0805 |
| | JP 1999-234652 | A | 1999 0820 |
| | JP 1999-347848 | A | 1999 1207 |
| | WO 1999-JP7390 | W | 1999 1228 |
| | US 2000-623057 | A3 | 2000 0825 |

OTHER SOURCE(S): MARPAT 133:81385
GI



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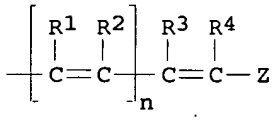


II

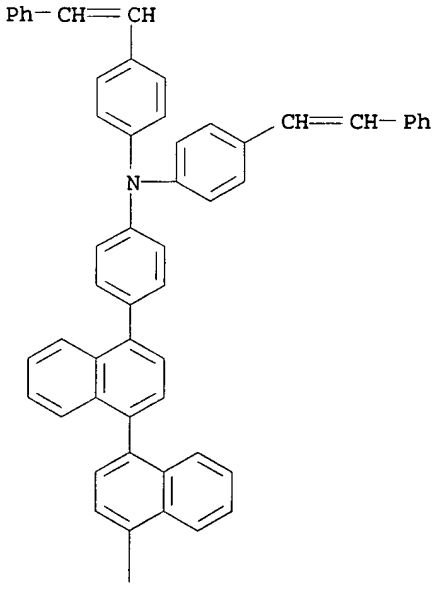
AB The devices having a high luminescent efficiency, a long life and a high heat resistance comprise I ( A = (substituted) C22-60 arylene; X1-4 = (substituted) C6-30 arylene; Y1-4 = II; a-d = 0-2; R1-4 = H, (substituted) alkyl, (substituted) aryl, cyano; R3 may be bonded to R4 to form a triple bond; Z = (substituted) aryl; n = 0, 1).

IT **279671-56-6**
RL: DEV (Device component use); USES (Uses)
(organic **electroluminescent** devices)

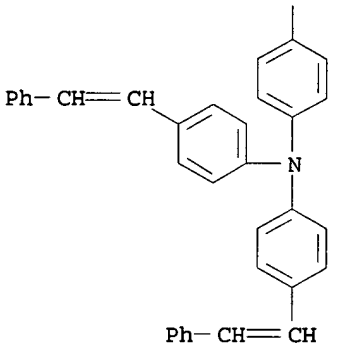
RN 279671-56-6 HCAPLUS

CN Benzenamine, 4,4'-[1,1'-binaphthalene]-4,4'-diylbis[N,N-bis[4-(2-phenylethenyl)phenyl]- (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 2-A




IC ICM C09K011-06
ICS C07C211-54; C07C211-58; C07C209-10; B01J031-24; H05B033-14
CC 73-5 (**Optical**, Electron, and Mass Spectroscopy and Other Related Properties)
ST **org luminous** long life **electroluminescent** device
IT Thermal resistance
(organic **electroluminescent** devices)
IT Polycarbonates, uses
RL: DEV (Device component use); USES (Uses)
(organic **electroluminescent** devices)
IT **Electroluminescent** devices
(zg43org. **electroluminescent** devices)
IT 2085-33-8, Tris(8-quinolinolato)aluminum 12789-79-6
50926-11-9, ITO 65181-78-4, TPD 142289-08-5,
4,4'-Bis(2,2-diphenylvinyl)biphenyl 177799-11-0 181367-28-2
186412-15-7 205930-46-7 221453-38-9 226086-76-6
239475-90-2 279671-24-8 279671-53-3 279671-54-4
**279671-56-6** 279671-57-7 279672-13-8 279672-14-9
279672-15-0 279672-16-1 279672-17-2 279672-18-3
279672-19-4 279672-20-7 279672-21-8 279672-22-9
279672-23-0 279672-24-1 279672-25-2 279672-27-4
279672-30-9 279672-32-1 279672-34-3 279672-35-4
279672-37-6 279672-39-8 279672-41-2 279672-42-3
279672-43-4 279672-44-5 279672-45-6 279672-46-7
279672-47-8 279672-48-9 279672-49-0 279672-50-3
279672-51-4 279672-52-5 279672-53-6 279672-54-7
279672-55-8 279672-56-9 279672-57-0 279672-58-1
RL: DEV (Device component use); USES (Uses)
(organic **electroluminescent** devices)
REFERENCE COUNT: 16 THERE ARE 16 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L54 ANSWER 44 OF 51 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2000:120871 HCAPLUS
DOCUMENT NUMBER: 132:173451
TITLE: Aromatic hydrocarbon compound for organic **electroluminescent** device
INVENTOR(S): Azuma, Hisahiro; Hosokawa, Chishio; Kusumoto, Tadashi
PATENT ASSIGNEE(S): Idemitsu Kosan Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 15 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| JP 2000053677 | A2 | 20000222 | JP 1998-225680 | 1998 0810 |
| PRIORITY APPLN. INFO.: | | | JP 1998-225680 | 1998 0810 |

OTHER SOURCE(S): MARPAT 132:173451

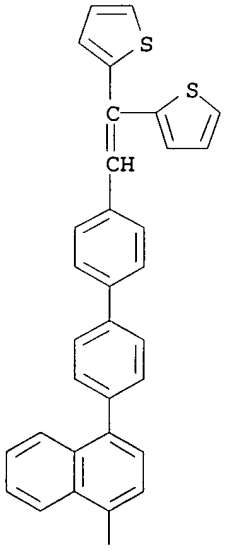
AB The aromatic hydrocarbon compound for organic **electroluminescent** device has structure (R1)(Y1)C=CH-X-CH=C(R2)(Y2) ( X = C1-30 alkyl, alkoxy, C6-20 aryl, C6-18 aryl oxy, etc.; Y1-2 = C4-30 heterocyclic rings containing S, polyarylene; R1-2 = H, C1-30 alkyl, alkoxy, C6-20 aryl, C6-18 aryl oxy, amino, etc.). The aromatic hydrocarbon compound provides an organic **electroluminescent** device of the high **electroluminescent** efficiency, the decreased driving voltage, and the excellent heat-resistance.

IT **258833-14-6P**
RL: PNU (Preparation, unclassified); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(aromatic hydrocarbon compound for organic **electroluminescent** device)

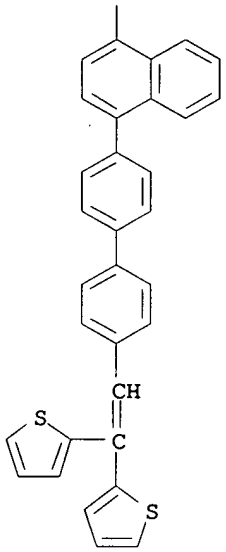
RN 258833-14-6 HCAPLUS

CN Thiophene, 2,2',2'',2'''-[[1,1'-binaphthalene]-4,4'-diylbis([1,1'-biphenyl]-4',4-diyl-2-ethenyl-1-ylidene)]tetrakis- (9CI) (CA INDEX NAME)

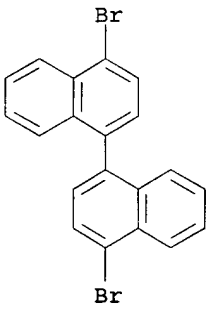
PAGE 1-A



PAGE 2-A




IT **49610-35-7**
RL: RCT (Reactant); RACT (Reactant or reagent)
(aromatic hydrocarbon compound for organic **electroluminescent** device)
RN 49610-35-7 HCAPLUS
CN 1,1'-Binaphthalene, 4,4'-dibromo- (9CI) (CA INDEX NAME)



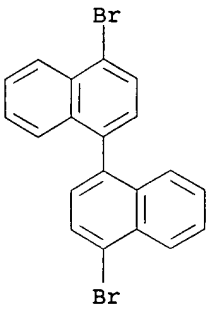

IC ICM C07D333-10
ICS C07D275-02; C07D277-22; C07D279-20; C07D333-54; C07D339-08; C07D409-14; C09K011-06; H05B033-14; H05B033-22
CC 74-13 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
Section cross-reference(s): 27, **73**
ST arom hydrocarbon org **electroluminescent** device
IT **Electroluminescent** devices
(aromatic hydrocarbon compound for organic **electroluminescent** device)
IT Aromatic compounds
RL: PNU (Preparation, unclassified); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(aromatic hydrocarbon compound for organic **electroluminescent** device)
IT Phosphors
(**electroluminescent**; aromatic hydrocarbon compound for organic **electroluminescent** device)

IT 258833-08-8P
RL: PNU (Preparation, unclassified); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)
(aromatic hydrocarbon compound for organic **electroluminescent** device)
IT 258833-09-9P 258833-10-2P 258833-12-4P **258833-14-6P**
258833-16-8P 258833-18-0P 258833-21-5P
RL: PNU (Preparation, unclassified); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(aromatic hydrocarbon compound for organic **electroluminescent** device)
IT 135-00-2, 2-Benzoylthiophene 523-27-3 38186-51-5
**49610-35-7** 121848-75-7 258833-11-3 258833-13-5
258833-15-7 258833-17-9 258833-19-1 258833-20-4
RL: RCT (Reactant); RACT (Reactant or reagent)
(aromatic hydrocarbon compound for organic **electroluminescent** device)

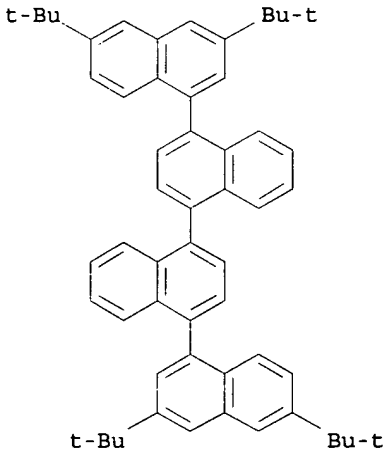
L54 ANSWER 45 OF 51 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1998:466566 HCAPLUS
DOCUMENT NUMBER: 129:115438
TITLE: Organic **electroluminescent** devices and luminescent display employing such organic **electroluminescent** devices
INVENTOR(S): Tamura, Shin-ichiro; Ishibashi, Tadashi
PATENT ASSIGNEE(S): Sony Corp., Japan
SOURCE: Eur. Pat. Appl., 22 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| EP 851715 | A1 | 19980701 | EP 1997-122303 | 1997 1217 |
| EP 851715 | B1 | 20020313 | | |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO | | | | |
| JP 10183112 | A2 | 19980714 | JP 1996-350713 | 1996 1227 |
| US 5858564 | A | 19990112 | US 1997-993863 | 1997 1218 |
| PRIORITY APPLN. INFO.: | | | JP 1996-350713 A | 1996 1227 |

OTHER SOURCE(S): MARPAT 129:115438
AB **Electroluminescent** devices are described in which the luminescent zone contains quaterterrylene or a derivative thereof as the luminescent material. Displays including the devices are also described.
IT **49610-35-7**, 4,4'-Dibromo-1,1'-binaphthyl
RL: RCT (Reactant); RACT (Reactant or reagent)
(organic **electroluminescent** devices and displays employing quaterterrylene derivs.)
RN 49610-35-7 HCAPLUS
CN 1,1'-Binaphthalene, 4,4'-dibromo- (9CI) (CA INDEX NAME)




IT **126847-92-5P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(organic **electroluminescent** devices and displays employing quaterterrylene derivs.)
RN 126847-92-5 HCAPLUS
CN 1,1':4',1'':4'',1'''-Quaternaphthalene, 3,3''',6,6'''-tetrakis(1,1-dimethylethyl)- (9CI) (CA INDEX NAME)




IC ICM H05B033-14
ICS H05B033-26
CC 73-11 (**Optical**, Electron, and Mass Spectroscopy and Other Related Properties)
Section cross-reference(s): 74, 76
ST quaterterrylene deriv **electroluminescent** device; display **electroluminescent** quaterterrylene deriv
IT **Electroluminescent** devices
(organic **electroluminescent** devices and displays employing quaterterrylene derivs.)
IT 1314-13-2, Zinc oxide, uses
RL: DEV (Device component use); USES (Uses)
(**electrodes** containing aluminum mixed with; organic **electroluminescent** devices and displays employing quaterterrylene derivs.)
IT 18282-10-5, Tin dioxide
RL: DEV (Device component use); USES (Uses)
(**electrodes** containing antimony mixed with; organic **electroluminescent** devices and displays employing quaterterrylene derivs.)
IT 7440-36-0, Antimony, uses

RL: DEV (Device component use); USES (Uses)
(**electrodes** containing tin dioxide mixed with; organic **electroluminescent** devices and displays employing quaterterrylene derivs.)

IT 7429-90-5, Aluminum, uses 7439-93-2, Lithium, uses 7439-95-4, Magnesium, uses 7440-39-3, Barium, uses 7440-57-5, Gold, uses 7440-70-2, Calcium, uses 7440-74-6, Indium, uses 12798-95-7 50926-11-9, Indium tin oxide
RL: DEV (Device component use); USES (Uses)
(**electrodes** containing; organic **electroluminescent** devices and displays employing quaterterrylene derivs.)

IT 188-73-8, Benzo[1,2,3-cd:4,5,6-c'd']diperylene 2085-33-8, Tris(8-hydroxyquinolinato)aluminum 4733-39-5, 2,9-Dimethyl-4,7-diphenyl-1,10-phenanthroline 65181-78-4, N,N'-Diphenyl-N,N'-bis(3-methylphenyl)-1,1'-biphenyl-4,4'-diamine
RL: DEV (Device component use); USES (Uses)
(organic **electroluminescent** devices and displays employing quaterterrylene derivs.)

IT 126822-84-2P
RL: DEV (Device component use); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)
(organic **electroluminescent** devices and displays employing quaterterrylene derivs.)

IT 91-20-3, Naphthalene, reactions 507-20-0, tert-Butyl chloride **49610-35-7**, 4,4'-Dibromo-1,1'-binaphthyl
RL: RCT (Reactant); RACT (Reactant or reagent)
(organic **electroluminescent** devices and displays employing quaterterrylene derivs.)

IT 10239-76-6P 10275-58-8P, 2,7-Di(tert-butyl)naphthalene 126822-80-8P 126822-86-4P **126847-92-5P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(organic **electroluminescent** devices and displays employing quaterterrylene derivs.)

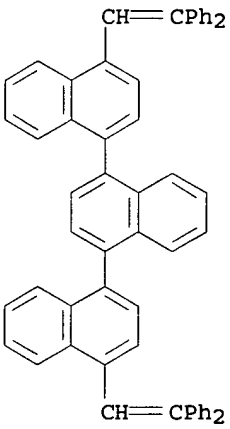
REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L54 ANSWER 46 OF 51 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1997:134690 HCAPLUS
DOCUMENT NUMBER: 126:164087
TITLE: Organic **electroluminescent** elements
INVENTOR(S): Azuma, Hisahiro; Matsura, Masahide; Sakai, Toshio
PATENT ASSIGNEE(S): Idemitsu Kosan Co, Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 37 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

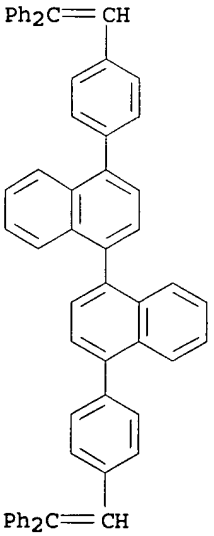
| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| JP 08333569 | A2 | 19961217 | JP 1996-82922 | 19960404 |
| JP 3175816 | B2 | 20010611 | | |
| PRIORITY APPLN. INFO.: | | | JP 1995-78744 A | 19950404 |

AB A long-life **electroluminescent** phosphor consists of distylyl arylene derivs., where the claims include the Markush formulas and the manufacturing process of representative phosphors.

IT **186412-14-6 186412-20-4**
RL: TEM (Technical or engineered material use); USES (Uses)
(preparation and use of distylyl arylene derivative **electroluminescent** phosphors)
RN 186412-14-6 HCAPLUS
CN 1,1':4',1''-Ternaphthalene, 4,4''-bis(2,2-diphenylethenyl)- (9CI) (CA INDEX NAME)



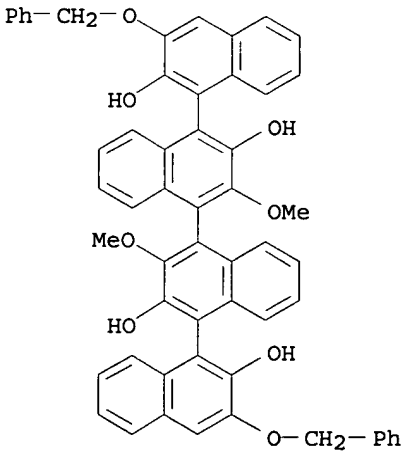
RN 186412-20-4 HCAPLUS
CN 1,1'-Binaphthalene, 4,4'-bis[4-(2,2-diphenylethenyl)phenyl]- (9CI) (CA INDEX NAME)



IC ICM C09K011-06
ICS H05B033-14
CC 73-11 (**Optical**, Electron, and Mass Spectroscopy and Other Related Properties)
ST distylyl arylene **electroluminescent** phosphor manuf
IT Phosphors
(preparation and use of distylyl arylene derivative **electroluminescent** phosphors)
IT 186259-43-8 186259-44-9 186259-51-8 186412-13-5
**186412-14-6** 186412-15-7 186412-16-8 186412-17-9

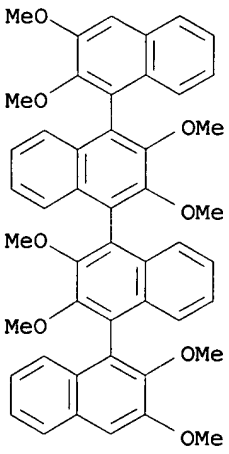
186412-18-0 186412-19-1 **186412-20-4** 186412-21-5
186412-22-6 186556-98-9
RL: TEM (Technical or engineered material use); USES (Uses)
(preparation and use of distylyl arylene derivative **electroluminescent** phosphors)

L54 ANSWER 47 OF 51 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1996:569042 HCAPLUS
DOCUMENT NUMBER: 125:328245
TITLE: Preparation of absolute configuration of hexahydroxyternaphthalene and octahydroxyquaternaphthalene derivatives
AUTHOR(S): Tanaka, Kiyoshi; Furuta, Takumi; Fuji, Kaoru; Miwa, Yoshihisa; Taga, Tooru
CORPORATE SOURCE: Inst. Chemical Research, Kyoto Univ., Sakyo, 606, Japan
SOURCE: Tetrahedron: Asymmetry (1996), 7(8), 2199-2202
CODEN: TASYE3; ISSN: 0957-4166
PUBLISHER: Elsevier
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Oxidative coupling reactions of the stereochem. defined tetrahydroxybinaphthalene derivs. gave a separable mixture of two diastereomers of (S,S,S)-quaternaphthalenes and (S,R.S)-quaternaphthalenes, whose structures were confirmed by an alternative chemical transformation through the ternaphthalenes as well as the X-ray structure anal. The CD spectra of the corresponding diastereomers were indicative of the stereochem. across the axis.
IT **183015-43-2P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and configuration of ternaphthalenols and quaternaphthalenols)
RN 183015-43-2 HCAPLUS
CN [1,1':4',1'':4'',1'''-Quaternaphthalene]-2,2',2''',3''-tetrol, 2'',3'-dimethoxy-3,3''-bis(phenylmethoxy)-, stereoisomer (9CI) (CA INDEX NAME)

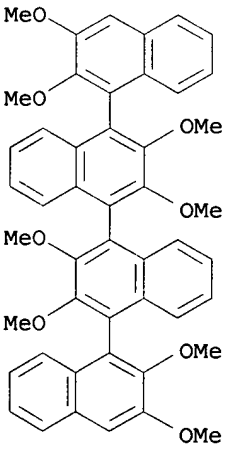



IT **183015-40-9P 183182-75-4P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation and configuration of ternaphthalenols and quaternaphthalenols)
RN 183015-40-9 HCAPLUS
CN 1,1':4',1'':4'',1'''-Quaternaphthalene,

2,2',2'',2''',3,3',3'',3'''-octamethoxy-, stereoisomer (9CI) (CA INDEX NAME)

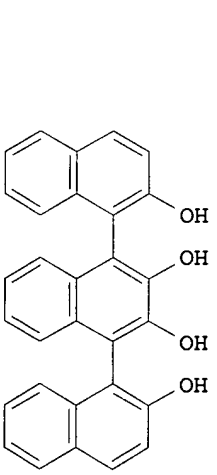


RN 183182-75-4 HCAPLUS
CN 1,1':4',1'':4'',1'''-Quaternaphthalene, 2,2',2'',2''',3,3',3'',3'''-octamethoxy-, stereoisomer (9CI) (CA INDEX NAME)

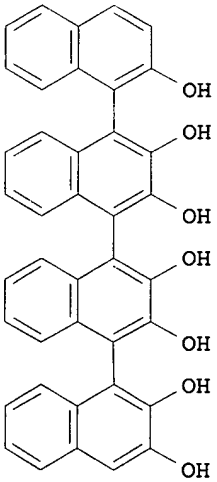


CC 25-24 (Benzene, Its Derivatives, and Condensed Benzenoid Compounds)
Section cross-reference(s): 75
IT 183015-33-0P 183015-34-1P 183015-35-2P 183015-38-5P
183015-39-6P 183015-41-0P **183015-43-2P** 183015-44-3P
183182-73-2P 183182-74-3P 183182-76-5P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and configuration of ternaphthalenols and quaternaphthalenols)
IT 183015-36-3P 183015-37-4P **183015-40-9P** 183015-42-1P
**183182-75-4P** 183182-77-6P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation and configuration of ternaphthalenols and quaternaphthalenols)

L54 ANSWER 48 OF 51 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1996:84633 HCAPLUS
DOCUMENT NUMBER: 124:231559
TITLE: Reaction of 1,4-Dibromo-2,3-dihydroxynaphthalene with 2-Naphthoxide Ion. Solvent and Cation Control in the Formation of the Conformationally Locked Stereoisomers of 2,2',3',2''-Tetrahydroxy-1,1':4',1''-ternaphthyl and 2,2',3',2'',3'',2'''-Hexahydroxy-1,1':4',1'':4'',1'''-quaternaphthyl
AUTHOR(S): Belohradsky, Martin; Budesinsky, Milos; Gunterova, Jana; Hodacova, Jana; Holy, Petr; Zavada, Jiri; Cisarova, Ivana; Podlaha, Jaroslav
CORPORATE SOURCE: Institute of Organic Chemistry and Biochemistry, Academy of Sciences, Prague, 166 10, Czech Rep.
SOURCE: Journal of Organic Chemistry (1996), 61(4), 1205-10
CODEN: JOCEAH; ISSN: 0022-3263
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English
GI




I




II

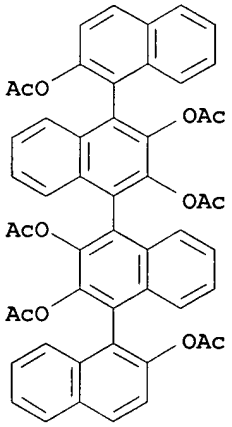
AB The reaction of the title dibromide with the 2-naphthoxide ion proceeds under remarkably mild conditions (25-50°), yielding all possible stereoisomers of ternaphthol I and quaternaphthol II. An unambiguous structure assignment has been made for the individual stereoisomers, and conditions for their thermal interconversion have been established. In contrast to a nonselective distribution of stereoisomers found in the thermodn. equilibrium mixture, a high stereoselectivity can be induced in the coupling reaction under kinetic control. The coordinating ability of the alkali metal counterion (M+) of the participating 2-naphthoxide ion has been found to play a key role in the stereocontrol, supporting strongly the formation of the cis stereoisomers of I and II. When the coordinating ability of M+ is suppressed by an efficient solvation and/or by complexation with 18-crown-6, formation of the trans stereoisomers prevails in the reaction.

IT **174741-66-3P 174848-27-2P 174848-28-3P**

RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)

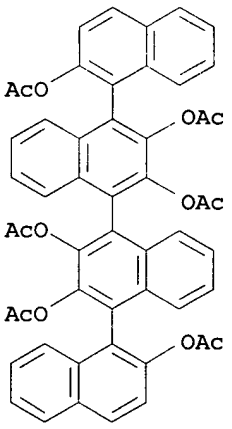
RN 174741-66-3 HCAPLUS

CN [1,1':4',1'':4'',1'''-Quaternaphthalene]-2,2',2'',2''',3',3''-hexol, hexaacetate, stereoisomer (9CI) (CA INDEX NAME)



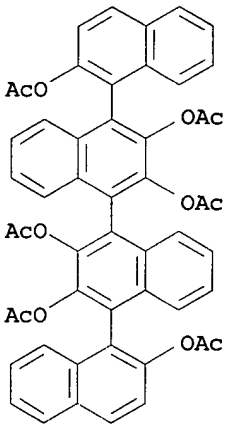

RN 174848-27-2 HCAPLUS

CN [1,1':4',1'':4'',1'''-Quaternaphthalene]-2,2',2'',2''',3',3''-hexol, hexaacetate, stereoisomer (9CI) (CA INDEX NAME)



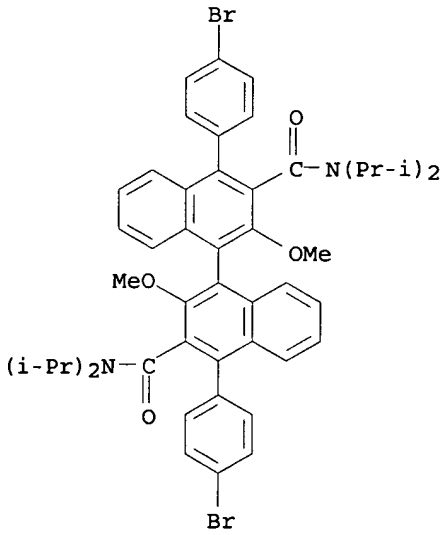

RN 174848-28-3 HCAPLUS

CN [1,1':4',1'':4'',1'''-Quaternaphthalene]-2,2',2'',2''',3',3''-hexol, hexaacetate, stereoisomer (9CI) (CA INDEX NAME)

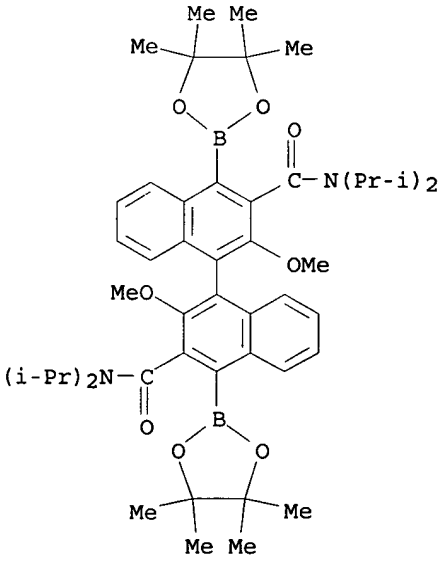



CC 22-3 (Physical Organic Chemistry)
IT 174741-65-2P **174741-66-3P** 174741-67-4P 174741-69-6P
174848-26-1P **174848-27-2P** **174848-28-3P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)

L54 ANSWER 49 OF 51 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1994:55181 HCAPLUS
DOCUMENT NUMBER: 120:55181
TITLE: Synthesis of a chiral nonracemic segmented screwlike oligomer. An unusual form of molecular chirality
AUTHOR(S): Bedworth, Peter V.; Tour, James M.
CORPORATE SOURCE: Dep. Chem. Biochem., Univ. South Carolina, Columbia, SC, 29208, USA
SOURCE: Macromolecules (1994), 27(2), 622-4
CODEN: MAMOBX; ISSN: 0024-9297
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The preparation of a chiral nonracemic conjugated organic oligomer that possesses a linear backbone with segmented helical functional groups emanating from the backbone is described. The monomer is a chiral nonracemic 4,4'-bis(p-bromophenyl)-1,1'-binaphthalene derivative Oligomerization is accomplished by Ni(0)-promoted coupling of the bromophenyl groups. The new oligomeric framework demonstrates that even highly aligned chiral groups along a common axis are insufficient for large optical rotational enhancements.
IT **151986-90-2P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and polymerization of)
RN 151986-90-2 HCAPLUS
CN [1,1'-Binaphthalene]-3,3'-dicarboxamide, 4,4'-bis(4-bromophenyl)-2,2'-dimethoxy-N,N,N',N'-tetrakis(1-methylethyl)-, (S)- (9CI) (CA INDEX NAME)



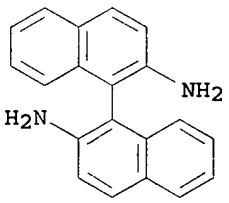
IT **151986-89-9P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and reaction of, with dibromobenzene)
RN 151986-89-9 HCAPLUS
CN [1,1'-Binaphthalene]-3,3'-dicarboxamide, 2,2'-dimethoxy-N,N,N',N'-tetrakis(1-methylethyl)-4,4'-bis(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)-, (S)- (9CI) (CA INDEX NAME)



CC 35-5 (Chemistry of Synthetic High Polymers)
IT **151986-90-2P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and polymerization of)
IT **151986-89-9P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(preparation and reaction of, with dibromobenzene)

L54 ANSWER 50 OF 51 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1974:114479 HCAPLUS
DOCUMENT NUMBER: 80:114479
TITLE: Frequency-brightness characteristics of the **electroluminescence** of organic substances
AUTHOR(S): Steblina, E. V.; Steblin, V. I.
CORPORATE SOURCE: USSR
SOURCE: Zhurnal Prikladnoi Spektroskopii (1974), 20(2), 304-5
CODEN: ZPSBAX; ISSN: 0514-7506
DOCUMENT TYPE: Journal
LANGUAGE: Russian
AB The frequencies of the elec. excitation at which the intensity of the **electroluminescence** is maximum (νmax) were determined for 40 various organic compds. in DMF with addition of Et4NBr as electrolyte. The luminescence was excited with 0.01-20000 Hz. Planary Pt **electrodes** were used. The compds. yielded mostly a single maximum Only dimethylnaphthalene gave 4 maximum at 0.02, 0.1, 7, and 20 Hz. A correlation between the structure of the organic compds. and γmax was observed
IT **4488-22-6**
RL: PRP (Properties)
(**electroluminescence** of, frequency-brightness characteristics of)
RN 4488-22-6 HCAPLUS
CN [1,1'-Binaphthalene]-2,2'-diamine (8CI, 9CI) (CA INDEX NAME)




CC 73-3 (Spectra by Absorption, Emission, Reflection, or Magnetic Resonance, and Other Optical Properties)
Section cross-reference(s): 22
ST **electroluminescence** org compd structure
IT **Luminescence**
(**electro**-, of **organic** compds., frequency-brightness characteristics of)
IT Molecular structure-property relationship
(**electroluminescence**, of organic compds.)
IT 82-05-3 83-32-9 85-01-8, properties 86-73-7 90-44-8
103-30-0 120-12-7, properties 129-00-0, properties 192-97-2
275-51-4 501-65-5 519-73-3 612-79-3 632-52-0 795-95-9
886-66-8 1450-63-1 1483-68-7 1499-10-1 1836-87-9
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3586-66-1 **4488-22-6** 11068-27-2 25229-66-7
25737-30-8 28515-57-3 35237-17-3 51590-14-8 51746-06-6
51850-43-2 51850-44-3 51850-45-4 51899-90-2
RL: PRP (Properties)
(**electroluminescence** of, frequency-brightness characteristics of)

L54 ANSWER 51 OF 51 HCAPLUS COPYRIGHT 2006 ACS on STN
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TITLE: Organic catalysts. XLI. Catalytic action of o-quinones. 4
AUTHOR(S): Pracejus, Horst
CORPORATE SOURCE: Martin-Luther-Univ., Halle, Germany
SOURCE: Ann. (1956), 601, 61-81
DOCUMENT TYPE: Journal
LANGUAGE: Unavailable

AB cf. C.A. 49, 12408e; 51,8066f. The optically active forms of 2 o-quinonecarboxylic acids in the α,α'-binaphthyl series were synthesized and their dehydrase activities tested towards DL- and optically active amino acids. Only 1 of these showed unequivocal figurational specificity towards phenylalanine, arginine, and valine. However the addition of hemin gave rise to an unspecific partial catalytic action in either of the model compds. The m.ps. of the various hydroquinones were taken in evacuated capillaries and were uncor. Other m.ps. were usually taken by the Kofler method and were corrected Ordinarily compds. (unless otherwise stated) were dried over P2O5 at 65°/2 mm. Me 3-hydroxy-2-naphthoate (1 mole) in 1 l. warm glacial AcOH was cooled rapidly to 15° and with stirring, treated dropwise with 76 cc. ice-cold HNO3 (d. 1.38) in 80 cc. AcOH. After 0.5 hr. at 0 to 10°, the product, washed with AcOH and Et2O, was treated at 0° with 2.5 l. 0.5M CH2N2 in Et2O, filtered, and the filtrate evaporated, giving 100-112 g. Me 4-nitro-3-methoxy-2-naphthoate (I), pale yellow, m. 73.5-4.5° (from MeOH); this hydrogenated in MeOH with Raney Ni gave 87% of the 4-NH2 analog (II) of I, m. 68-9°. In some of the prepns. of II, the mother liquors from the main portion of II gave an HCl salt, m. 195-207° (decomposition) (its free base, b. 117-20°/0.0001 mm., m. 47-9°, apparently an unstable modification of II); the 4-Ac derivative of II, m. 184.5-5.5° (from C6H6-petr. ether); 4-phthaloyl derivative of II, m. 200-1.5° (from C6H6). II (1 mole) in 500 cc. warm MeOH and 1 mole (AcO)2Hg in 1.2 l. boiling MeOH containing little AcOH were each cooled separately to incipient crystallization, then combined promptly, and kept 24 hrs. at 20°, the mother liquor decanted, and the crystalline sediment triturated with Et2O to remove undesirable microcrystals and to give 370 g. coarser crystalline residue, consisting of the 1-AcOHg derivative (III) of II, m. 133-6°. Powdered III (0.1 mole) was warmed 0.5 hr. with 70 cc. Ac2O, the product pressed out on a kaolin plate, washed with 100 cc. MeOH, warmed 0.5 hr. with 100 cc. MeOH and 50 g. KI in 80 cc. H2O, then stirred 3 hrs. with 24 g. iodine in 125 cc. MeOH, kept 48 hrs., heated to boiling, decanted from undissolved material, and the solution poured into warm H2O, giving 27.5 g. Me 1-iodo-3-methoxy-4-acetamido-2-naphthoate (IV), m. 230-1° (from PhMe). Formed analogously to IV was the 1-Br analog, rectangles, m. 196-7°. III (0.25 mole) with 0.5 mole phthalic anhydride in 300 cc. HCONMe2 was stirred and heated 1 hr. at 110-20°, cooled to about 50°, diluted with 450 cc. H2O, filtered, the precipitate washed with MeOH and suspended in 300 cc. H2O, stirred 0.5 hr. with 0.78 mole KI, heated with 250 cc. MeOH and 0.275 mole iodine, stirred 4 hrs., cooled to -5°, washed with H2O, then a little MeOH, dried, extracted with 1.5 l. C6H6, filtered through active Al2O, and the filtrate on concentration gave 59-63 g. Me 1-iodo-3-methoxy-4-phthalimido-2-naphthoate (V), m. 215-17° (from PhMe and MeOH). Dried V (40 g.) was intimately mixed with 30 g. Cu powder, heated under N to 220-30°, stirred 0.5 hr., treated with another 20 g. Cu, heated 0.5 hr., cooled, powdered, and extracted with Me2CO, giving 45-50% dl-2,2'-dicarbomethoxy-3,3'-dimethoxy-4,4'-diphthalimido-1,1'-binaphthyl (VI), colorless, m. 274-6° (from PhMe-petr. ether), showing polymorphism, frequently m. 245°, recrystg. at about 250-60°, and rem. 274-6°. VI (1.44 g.) in 20 cc. dioxane, 20 cc. MeOH, and 4.1 cc. N KOH in MeOH was boiled 1 hr., giving, after acidification, 1.4 g. amorphous, somewhat

impure dl-2,2'-dicarbomethoxy-3,3'-dimethoxy-4,4'-di(o-carboxybenzamido)-1,1'-binaphthyl, m. 135-7° (from CHCl3 by precipitation with Et2O), which when heated at 150-200°, lost H2O and formed VI. VI (1.44 g.) in 5M KOH in MeOH-dioxane, was evaporated to dryness and then boiled with 40 cc. 15% KOH, giving a crystalline K salt, which was acidified, giving impure dl-3,3'-dimethoxy-4,4'-di(o-carboxybenzamido)-2,2'-dicarboxy-1,1'-binaphthyl, m. 230-50° (decomposition). Crude VI (23 g.) was boiled 4 hrs. with 5 g. N2H4.H2O in 650 cc. EtOH, evaporated, extracted twice with 200 cc. each of N HCl, filtered, and the filtrate precipitated with NH4OH, giving 8 g. dl-2,2'-dicarbomethoxy-3,3'-dimethoxy-4,4'-diamino-1,1'-binaphthyl (VII) in 2 modifications, m. 208-9° and 215-17.5° (the lower-melting one when heated very slowly passed to the higher-melting form). VII (9.21 g.) and 19.5 g. Pb(OAc)4 in 125 cc. glacial AcOH was shaken vigorously for 5 min., kept 16 hrs., poured into 1 l. boiling 2N HCl, cooled, and extracted repeatedly with AcOEt, the extract washed with NaHCO3, dried, filtered, and concentrated to 25 cc. gave 4.05 g. dl-(2,2'-dicarbomethoxy-1,1'-binaphthyl-3,3',4,4'-diquinone) (VIII), red prisms, m. 257-60° (from PhMe), retaining 1 mole AcOH when crystallized from AcOH. VIII (2.66 g.) in hot Me2CO was treated with 1 cc. H2SO3, and after cessation of a play of colors, with 150 cc. aqueous H2SO3, and kept 0.5 hr. at 20° and 3 hrs. at -10°, giving 2.43 g. dl-2,2'-dicarbomethoxy-3,3',4,4'-tetrahydroxy-1,1'-binaphthyl (IX), pale yellow leaflets, m. 223-4° (from aqueous MeOH). By mixing equimolar amts. of VIII and IX in dioxane or Me2CO, a dark reddish-brown quinhydrone solution was formed. IX (2.43 g.) and 0.5 g. Na2SO3 were heated in a stream of N for 1 hr. with 50 cc. 20% KOH, acidified with H2SO3 and HCl, extracted with Et2O, the extract concentrated to 10 cc., and cooled to -10° and finally to -70°, giving 1.69 g. dl-2,2'-dicarboxy-3,3',4,4'-tetrahydroxy-1,1'-binaphthyl (X), m. 340-42° (with some decomposition at about 280°). X (1.23 g.) in 60 cc. absolute EtOH with 0.97 g. quinine in 40 cc. hot EtOH kept 2 hrs. under N at 20°, recrystd. from EtOH, and dried 12 hrs. at 20°/2 mm. over H2SO4, gave 0.76 g. of the quinine salt, C42H38O10N2 (XI), [α]D20 15.5° (c 0.4, pyridine), gradually undergoing oxidation with loss in α value. XI shaken with aqueous H2SO4 containing SO2, extracted with Et2O, and the extract washed and dried gave 0.44 g. d-isomer (Xa) of X, m. 189-92°, [α]D21 131° (c 0.4, absolute EtOH). The 1st mother liquors from XI evaporated to dryness in vacuo, acidified, and extracted with Et2O gave the impure l-isomer of X (Xb), [α]D21 -84° (c 0.4, in EtOH). X (0.15 g.) in 5 cc. Et2O was treated with 0.2 cc. N2O4, cooled promptly to 0°, and the resulting precipitate washed with Et2O and dried, giving 0.13 g. dl-2,2'-dicarboxy-1,1'-binaphthyl-3,3',4,4'-diquinone hemihydrate (XII), orange microcrystals, m. 236-8° (decomposition) [from dioxane (XIII)]. Xa (0.15 g.) in 7.5 cc. CHCl3 at 0° with N2O4 gave 120 mg. l-isomer of XII (XIIa), m. 228-30° (from CHCl3), [α]D24 -38 to -40° (c 0.2, dry XIII). Impure Xb was extracted rapidly with Et2O to remove the most readily soluble portion, the Et2O evaporated, the residue taken up in CHCl3, and oxidized with N2O4, giving the d-isomer (XIIb) of XII, [α]D22 28-36° (c 0.2, dry XIII). VIII (1 g.) was boiled 0.5 hr. with 0.65 g. 1,2-(H2N)2C6H4 in 6 cc. AcOH, and diluted with 6 cc. H2O giving dl-1,2,1',2'-dibenzo-4,4'-dicarbomethoxybiphenazine (XIV), pale yellow, m. 354-7° (from PhMe, followed by drying 9 hrs. at 140-60°/0.0001 mm.), giving a cerise color with H2SO4; corresponding free acid (XIVa), m. 315-18° (by saponifying XIV with KOH in BuOH followed by acidification, or better by heating XII with 1,2-(H2N)2C6H4 in AcOH), giving a difficultly soluble K salt. Crude XIVa (0.5 g.) refluxed 11 hrs. with 20 cc. quinoline and a trace Cu powdered, steam distilled, the residue treated with dilute HCl, washed with H2O, and dried over P2O5 gave a precipitate which in 500 cc. CHCl3

was passed through Al2O3, giving in the eluate 280 mg. 1,2,1',2'-dibenzo-3,3'-biphenazine, felted yellow needles, m. 387.5-9.5° (from CHCl3 at -6°), identical with the diquinoxalino derivative prepared from 1,1'-binaphthyl-3,3',4,4'-diquinone. 3-Hydroxy-2-naphthoic acid (7.52 g.) and 4 g. NaHCO3 in 200 cc. H2O was treated with 23.8 g. K nitrosodisulfonate and 15 g. AcONa in 1.3 l. H2O at 20° and after 4 hrs. acidified, giving dl-1-(2-hydroxy-3-carboxy-1-naphthyl)-2-carboxy-3,4-naphthoquinone hemihydrate (XV), red microcrystals, m. 281-4° (decomposition) (from HCONMe2, by addition of hot H2O, or 1:4 XIII-H2O); obtained solvent-free when a dried solution in Me2CO was treated with methylcyclohexane, evaporated in vacuo over H2SO4, and then heated 13 hrs. at 130°/0.0001 mm. The dl-di-Me ester of XV, orange, needles or leaflets, m. 221-23°, recrystg. and rem. 246-8°. A cooled solution of XV in dilute NaHCO3 was saturated with SO2, kept several hrs., and strongly acidified, giving 60% dl-2',3,4-trihydroxy-2,3'-dicarboxy-1,1'-binaphthyl-H2O (XVI), losing H2O when dried 12 hrs. at 130°/0.0001 mm. over P2O5; this (11.7 g.) with quinine in Me2CO gave 10 g. quinine salt of the d-isomer of XVI, yellow (purified by solution in HCONMe2 and precipitation with Et2O), [α]D23 -24.5° (c 0.5, pyridine); this, by the method given above, gave the free d-acid monohydrate (XVIa), [α]D22 71.6° (c 1, absolute EtOH). The Me2CO mother liquor from the above quinine salt evaporated to dryness, extracted with Et2O, the extract washed with dilute H2SO4 containing SO2, and evaporated gave the l-isomer monohydrate (XVIb) of XVI, [α]D23 (after drying) -53.5° (c 0.6, absolute EtOH). XVIa (4.08 g.) in 20 cc. MeOH added to 100 cc. 0.001M Na2CO3, treated promptly with 1 g. K nitrosodisulfonate in 200 cc. H2O, after 5 min. acidified to Congo red, and filtered gave 3.66 g. d-isomer (XVa).H2O of XV, decompose 268-76°, [α]D21 163° (c 0.5, XIII); XVa.XIII orange-red needles, m. 182-90°, resolidifying and rem. 285-90° (decomposition), [α]D21 131° (c 0.4 XIII). XVIb treated as above gave the impure l-form (XVb).H2O of XV, which when crystallized from XIII gave a mixture of dark red prisms of XV and orange red needles of XVb, imperfectly separated by solution in Me2CO and fractional precipitation with petr. Et2O, XVb being more soluble than XV. The purest fraction of XVb.XIII, orange-red needles, had [α]D21 -84 (c 0.4, XIII). XV in AcOH-XIII was heated 1 hr. with 1,2-(H2N)2C6H4, giving 90% dl-1,2-benzo-3-(2-hydroxy-3-carboxy-1-naphthyl)-4-carboxyphenazine, pale yellow, m. 300-304° (decomposition) (from aqueous XIII or aqueous HCONMe2), giving a rather insol. Na salt, a red color with H2SO4, a blue-green color with FeCl3 in alc., and not coupling with p-HO3SC6H4N2Cl. The preceding phenazine derivative with Cu powder and quinoline gave 20% 1,2-benzo-3-(2-hydroxy-1-naphthyl)phenazine, yellow, m. 303-5° (from AcOBu), giving no color with H2SO4 or aq NaOH, but a deep red with NaOH in EtOH. 4-Amino-3-hydroxy-2-naphthoic acid (10 g.) was stirred and refluxed 1 hr. with 600 cc. N H2SO4 containing 0.1 g. benzoquinone, giving 7-8 g. 3,4-dihydro-2-naphthoic acid (XVII), m. 237-9° (decomposition), which treated in Et2O with N2O4 at 0° and cooled to -70°, gave 2-carboxy-3,4-naphthoquinone (XVIII), m. 169-80° (decomposition) (from glacial AcOH) (for the preparation of larger amts. of XVIII, CHCl3 should replace Et2O to avoid danger). The Me ester of XVII heated with Hg(OAc)2 in MeOH gave the Me ester of XVIII, m. 158-9°. Equimolar amts. of the Na salt of XVIII and Na 3-hydroxy-2-naphthoate under N in H2O containing AcONa condensed and acidified gave 46% XVI, decompose 335-40°, which with N2O4 or K nitrosodisulfonate in NaHCO3 gave XV. Na 2-amino-6-naphthalenesulfonate treated with Ac2O, brominated and saponified with KOH, gave K 1-bromo-2-amino-6-naphthalenesulfonate, leaflets (from H2O); free acid (XIX), crystalline powder having no m.p. 2,6-(H2N)(HO3S)C10H6 heated with Ac2O, brominated in concentrated aqueous solution and then methylated, gave Me 1-bromo-2-acetamido-6-

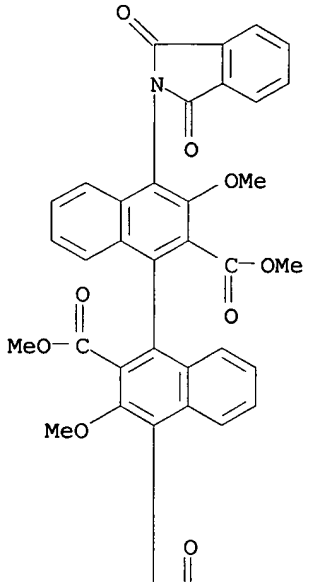
naphthalenesulfonate, yellow needles, m. 169-71° (from C6H6-petr. ether). The following derivs. of 1-bromo-2-cyano-6-naphthalenesulfonic acid (XX) were prepared: (from diazotized XIX carried through the Sandmeyer reaction) the gelatinous K salt monohydrate of XX; K salt-HCONMe2, needles; sulfonyl-chloride (XXa), C11H5O2NClBrS, yellow prisms, m. 186-9° (from PhMe); Me ester of XX, yellow microcystals, m. 205-6°; dimethylamide (XXb) (prepared from XXa and Me2NH), colorless, m. 190-1°. The K salt of XX heated with 25% KOH and acidified to Congo red gave K 1-hydroxy-2-carboxy-6-naphthalenesulfonate, yellow microcrystals, giving a greenish blue color with FeCl3. XXb heated 5 hrs. at 240-60° with Cu powder gave 15-17% 2,2'-dicyano-1,1'-binaphthyl-6,6'-bis(sulfonyl dimethylamide), colorless, m. 335-7° (from aqueous XIII), and 2-cyano-6-naphthalenesulfonyl dimethylamide, m. 178-9° (from 90% EtOH), the latter being separated by its greater solubility in boiling EtOH. [In the following, (XXI), (XXIa), and (XXIb) refer to DL-, D-, and L-phenylalanine, resp.]. Catalytic dehydrogenation measurements of amino acids in the presence of pyridine and AcOH using various quinones as catalysts were made by the method of Langenbeck, et al. (C.A. 38, 14934). The catalytic activities of the quinones were reduced by the introduction of CO2H groups, and greatly lowered by introducing CO2Me groups. Even without the presence of DL-alanine as substrate, XVIII itself took up O, and was greatly degraded, hence the manometric measurements led to no definite conclusions, either in this case or with other quinones which readily took up O. XXIb was dehydrogenated about 30% more rapidly by XVb than by XVa. L(+)-Arginine and L(+)-valine were also degraded somewhat more rapidly by XVa than by XVb. Results with glutamic acid and histidine were inconclusive. With XVa there was always an initial time lag in the rate of dehydrogenation and maximum reaction rates were attained only after 2-4 hrs. When small amts. of hemin (10-6 moles per 10-5 mole catalyst and 7.1 moles substrate) were used, the initial time lag disappeared. Although the rate of O consumption showed no marked increase when XVa acted upon XXIa, there was a decided rate increase in the dehydrogenation of XXIb. Hemin also increased the catalytic activity of XII in the dehydrogenation of either XXIa or XXIb. Manometric studies were made only with D- or L-amino acids. However, the dehydrogenation of XXI was studied as follows. XXI (0.6 g.) in 30 cc. 10% AcOH and 198 mg. XVa in 70 cc. pyridine was shaken 7 hrs. with air at 37°, acidified with 5N HCl, treated with SO2 and extracted 10 hrs. with Et2O. The residue, made alkaline with solid NaOH, was reextd. with Et2O to remove pyridine, and from the residual concentrated NaCl solution the N-(2,4-dinitrophenyl) derivative (XXII) was isolated and converted by CH2N2 to 558 mg. of a mixture of Me N-(2,4-dinitrophenyl)alanines (XXIII) [α]D22 2.4° (from dry XIII), purified by solution in C6H6-petr. ether, chromatographing on CaCO3, and eluting with Me2CO-MeOH. The mother liquor from XXII, on purification and esterification gave 20 mg. of a mixture similar to XXIII, [α]D22 39° (in XIII). From pure XXIa was formed similarly Me N-(2,4-dinitrophenyl)-D-β-phenylalanine, yellow needles, m. 111.5-112°, [α]D22 102° (c 1, XIII). Apparently 51.5% of the original XXI had been recovered (as XXIII), and from the [α]D this was judged to contain 51.6% XXIa and 48.4% XXIb. 22 references.

IT **116281-45-9**, [1,1'-Binaphthalene]-2,2'-dicarboxylic acid, 3,3'-dimethoxy-4,4'-diphthalimido-, dl-, dimethyl ester (preparation of)

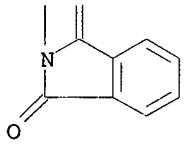
RN 116281-45-9 HCAPLUS

CN [1,1'-Binaphthalene]-2,2'-dicarboxylic acid, 3,3'-dimethoxy-4,4'-diphthalimido-, dimethyl ester (6CI) (CA INDEX NAME)

PAGE 1-A



PAGE 2-A



CC 10 (Organic Chemistry)
IT 21905-88-4, 2-Naphthoic acid, 3,4-dihydro-3,4-dioxo- 22440-38-6, 2-Naphthoic acid, 3,4-dihydro- 89509-95-5, 2-Naphthoic acid, 3,4-dihydro-3,4-dioxo-, methyl ester 99073-91-3, 2-Naphthalenesulfonic acid, 6-amino-5-bromo- 99971-52-5, 2-Naphthalenesulfonyl chloride, 5-bromo-6-cvano- 100374-88-7, 2-Naphthalenesulfonamide, 5-bromo-6-cyano-N,N-dimethyl- 100724-19-4, 2-Naphthalenesulfonamide, 6-cyano-N,N-dimethyl- 100727-90-0, 2-Naphthoic acid, 3-methoxy-4-nitro-, methyl ester 100968-75-0, 2-Naphthoic acid, 4-acetamido-1-iodo-3-methoxy-, methyl ester 101089-27-4, 2-Naphthoic acid, 1-(acetoxymercuri)-4-amino-3-methoxy-, methyl ester 101102-68-5, 2-Naphthoic acid, 4-acetamido-1-bromo-3-methoxy-, methyl ester 102183-58-4, 2-Naphthoic acid, 1-iodo-3-methoxy-4-phthalimido-, methyl ester 102467-03-8, 2-Naphthoic acid, 3-methoxy-4-phthalimido-, methyl ester 103402-91-1, 5,5'-Bibenzo[a]phenazine 104398-58-5, [5,5'-Bibenzo[a]phenazine]-6,6'-dicarboxylic acid, dimethyl ester 105903-25-1, 2-Naphthoic acid, 4-amino-3-methoxy-, methyl ester 105947-08-8, 2-Naphthalenesulfonic acid, 6-acetamido-5-bromo-, methyl ester 108618-83-3, 2-Naphthoic acid, 4-acetamido-3-methoxy-, methyl ester 114159-81-8, [1,1'-Binaphthalene]-2,2'-dicarboxylic acid, 4,4'-diamino-3,3'-dimethoxy-, dl-, dimethyl ester 114398-27-5, [1,1'-Binaphthalene]-6,6'-disulfonamide, 2,2'-dicyano-N,N,N',N'-tetramethyl- 114637-00-2, Benzo[a]phenazine-6-carboxylic acid, 5-(3-carboxy-2-hydroxy-1-naphthyl)-, dl- 116079-82-4, 2-Naphthol, 1-benzo[a]phenazin-5-yl- 116213-17-3, [1,1'-Binaphthalene]-2,2'-dicarboxylic acid, 4,4'-bis(o-carboxybenzamido)-3,3'-dimethoxy-, dl-

**116281-45-9**, [1,1'-Binaphthalene]-2,2'-dicarboxylic acid, 3,3'-dimethoxy-4,4'-diphthalimido-, dl-, dimethyl ester 120088-64-4, 2-Naphthalenesulfonic acid, 6-amino-5-bromo-, potassium salt 123153-90-2, [1,1'-Binaphthalene]-2,2'-dicarboxylic acid, 4,4'-bis(o-carboxybenzamido)-3,3'-dimethoxy-, dimethyl ester 857222-01-6, 2-Naphthoic acid, 1-hydroxy-6-sulfo-, potassium salt 860439-83-4, 2-Naphthoic acid, 4-amino-3-methoxy-, hydrochloride
(preparation of)

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